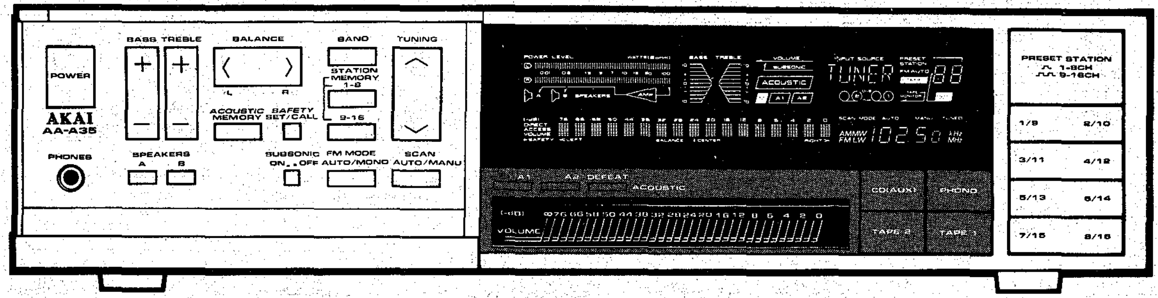
AKAI SERVICE MANUAL

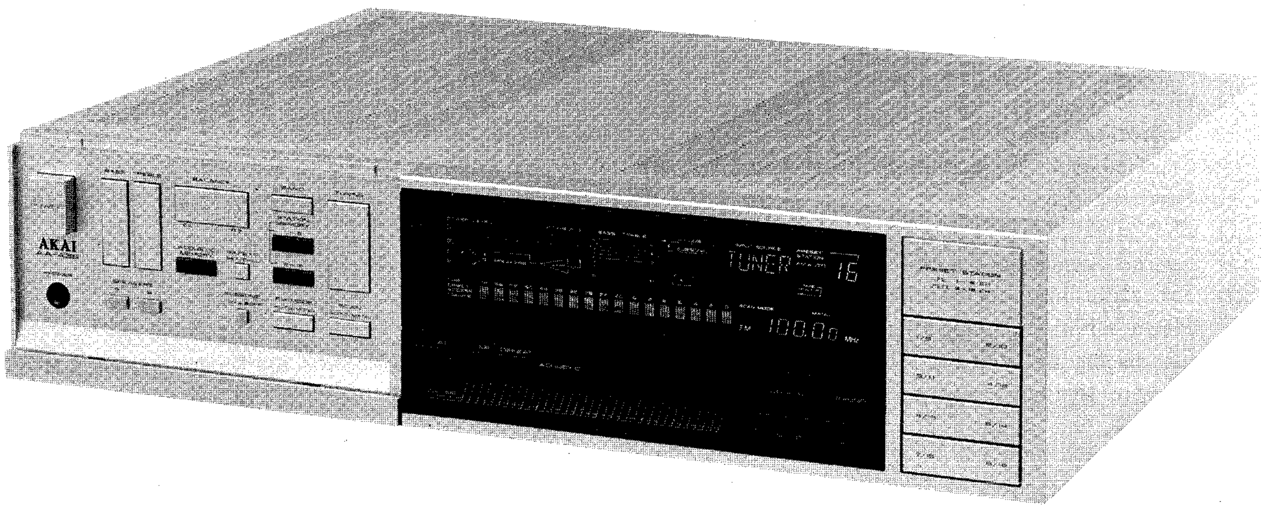

POWER
AKAI
AA-A35
PHONES
BASS TREBLE
SPEAKERS
A B
BALANCE
L R
ACOUSTIC MEMORY
SAFETY SET/CALL
BAND
STATION MEMORY
1-8
9-16
SUBSONIC
ON OFF
FM MODE
AUTO/MONO
TUNING
SCAN
AUTO/MANU
TUNER
A1
A2 DEFEAT
ACOUSTIC
VOLUME
CD(AUX)
PHONO
TAPE 2
TAPE 1
PRESET STATION
1-8CH
9-16CH
1/9
2/10
3/11
4/12
5/13
6/14
7/15
8/16

COMPUTER CONTROLLED STEREO RECEIVER

MODEL AA-A35/L

ABBREVIATIONS FOR SERVICE MANUAL
MODEL AA-A35/L

ABBREVIATION	EXPLANATION
AC	Alternating Current
A/D	Analog/Digital
AGC	Auto Gain Control
ALC	Auto Level Control
AM	Amprititude Modulation
CK	ClocK
D	Data
DET	DETector
FLD (FL DISPLAY)	FLuorescent Display
FM	Frequency Modulation
FREQ	FREQuency
GND	GrouND
IF	Intermediate Frequency
INV	INVert
LW	Long Wave
MANU	MANUal
MC	Moving Coil
MM	Moving Magnet
MPX	Multi PleX
MW	Medium Wave
OSC	OSCillator
PLL	Phase Locked Loop
RST	ReSeT
SENS	SENSitivity
SM	Signal Meter
ST	STrobe
SW	SWitch



COMPUTER CONTROLLED STEREO RECEIVER

MODEL AA-A35/L

SECTION 1 SERVICE MANUAL 3

SECTION 2 PARTS LIST 23

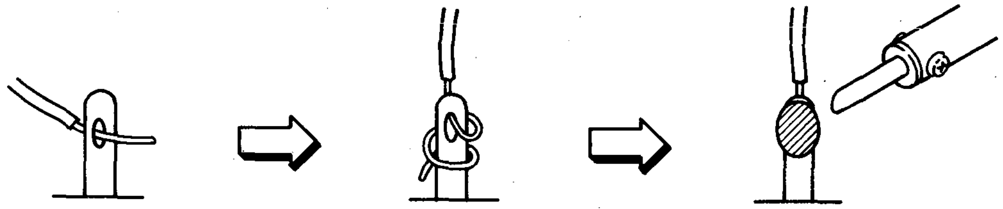
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for $\boxed{C}$ or $\boxed{A}$, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.

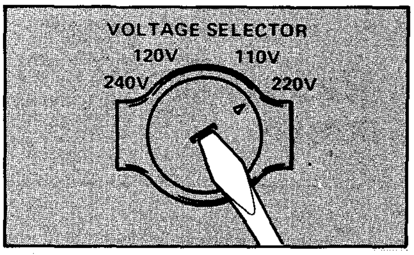


6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required. If your machine's voltage can be converted:

Before connecting the power cord, turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



SECTION 1

SERVICE MANUAL

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IV. PRINCIPAL PARTS LOCATION 7
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VIII. PC BOARD TITLES AND IDENTIFICATION NUMBERS 20

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

FM TUNER SECTION

TUNING FREQUENCY RANGE	87.5MHz to 108.0MHz
USABLE SENSITIVITY (IHF)	11.2dBf (300ohms)
QUIETING SENSITIVITY (IHF) (S/N = 50dB)	16.2dBf (Mono)/37.2dBf (Stereo)
CAPTURE RATIO	1.5dB
SELECTIVITY (IHF)	60dB (400kHz)
IMAGE REJECTION	85dB
IF REJECTION	90dB
SPURIOUS REJECTION	90dB
AM SUPPRESSION	60dB
S/N (IHF)	75dB (Mono)/65dB (Stereo)
HARMONIC DISTORTION	0.1% (Mono)/0.3% (Stereo)
STEREO SEPARATION	45dB (1kHz)

LW TUNER SECTION (AA-A35L only)

TUNING FREQUENCY RANGE	146kHz to 353kHz
USABLE SENSITIVITY (IHF)	800μV/m
SELECTIVITY (IHF)	30dB
IMAGE REJECTION	45dB
IF REJECTION	55dB
S/N	35dB
T.H.D	2.0%
ANTENNA	Loop antenna

AM TUNER SECTION (MW for AA-A35L)

TUNING FREQUENCY RANGE	530kHz to 1,610kHz for USA and Canada 531kHz to 1,602kHz for other countries
USABLE SENSITIVITY (IHF)	300μV/m
SELECTIVITY (IHF)	25dB
IMAGE REJECTION	40dB
IF REJECTION	55dB
S/N	40dB
T.H.D.	1.0%
ANTENNA	Loop antenna

AMPLIFIER SECTION

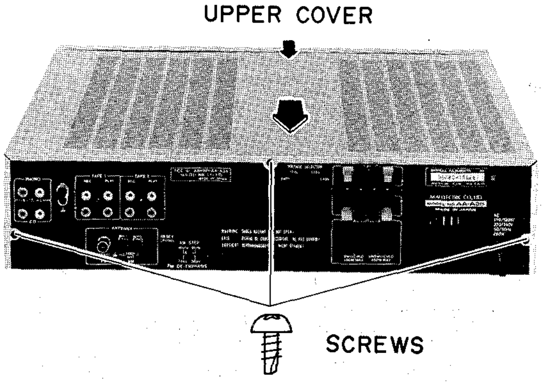
RATED POWER OUTPUT		8 ohms
	20Hz to 20kHz	45W x 2/0.02%
	1kHz	53W x 2/0.02%
MUSIC POWER		100W
POWER BANDWIDTH (IHF, –3dB, 8 ohms)		5Hz to 70kHz/0.1%
S/N	PHONO	75dB
	AUX	98dB
RESIDUAL NOISE (8 ohms)		0.5mV
CHANNEL SEPARATION (IHF)	PHONO/AUX	65dB (1kHz)
DAMPING FACTOR (1kHz, 8 ohms)		50
OUTPUT	SPEAKER	A or B 4 to 16 ohms A + B 8 to 16 ohms
INPUT SENSITIVITY/IMPEDANCE	PHONO	2.5mV/100kohms
	AUX/TAPE	150mV/47kohms
OUTPUT LEVEL/IMPEDANCE	TAPE REC	150mV/3kohms
FREQUENCY RESPONSE	PHONO (RIAA)	±0.5dB (30Hz to 15kHz)
	AUX/TAPE	5 Hz to 100kHz, –3dB
TONE CONTROL	BASS	±8dB (100Hz)
	TREBLE	±8dB (10kHz)
FILTER	SUBSONIC	–3dB/18Hz
PHONO MAX. INPUT (MM)		150mV
POWER REQUIREMENTS		120V, 60Hz for USA & Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK & Australia 110V/120V/220V/240V, 50/60Hz switchable for other countries
DIMENSIONS		440(W) x 110(H) x 345(D) mm
WEIGHT		8.4kg

*** For improvement purposes, specifications and design are subject to change without notice.**

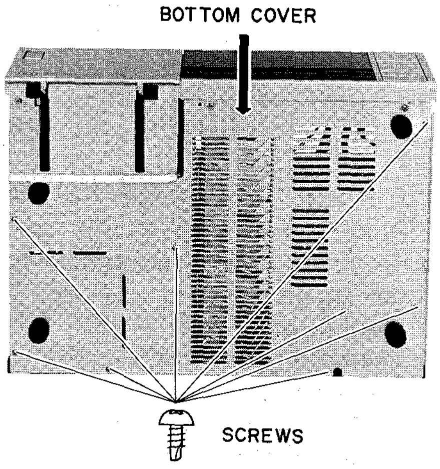
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

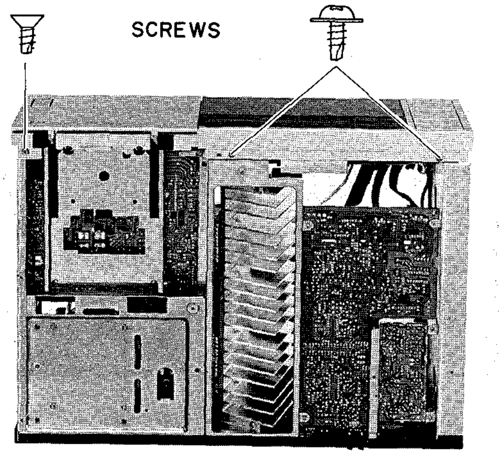
1


UPPER COVER
SCREWS

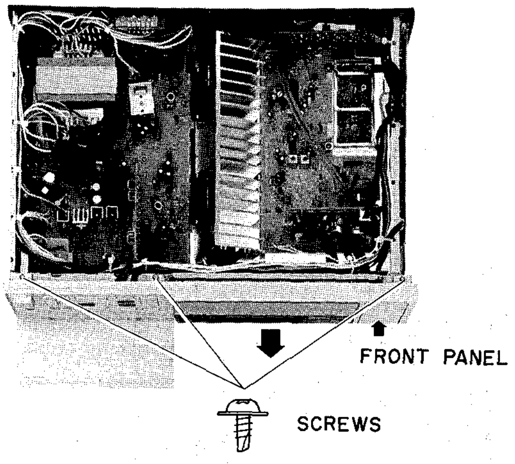
2


BOTTOM COVER
SCREWS

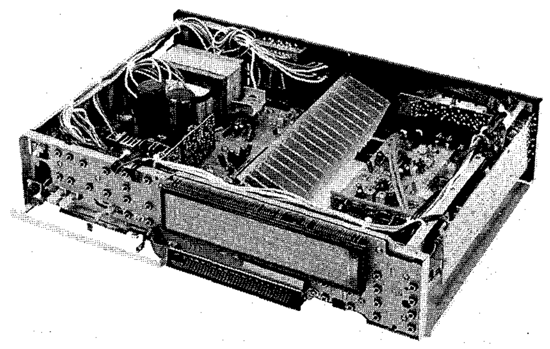
3



4


FRONT PANEL
SCREWS

5



III. CONTROLS

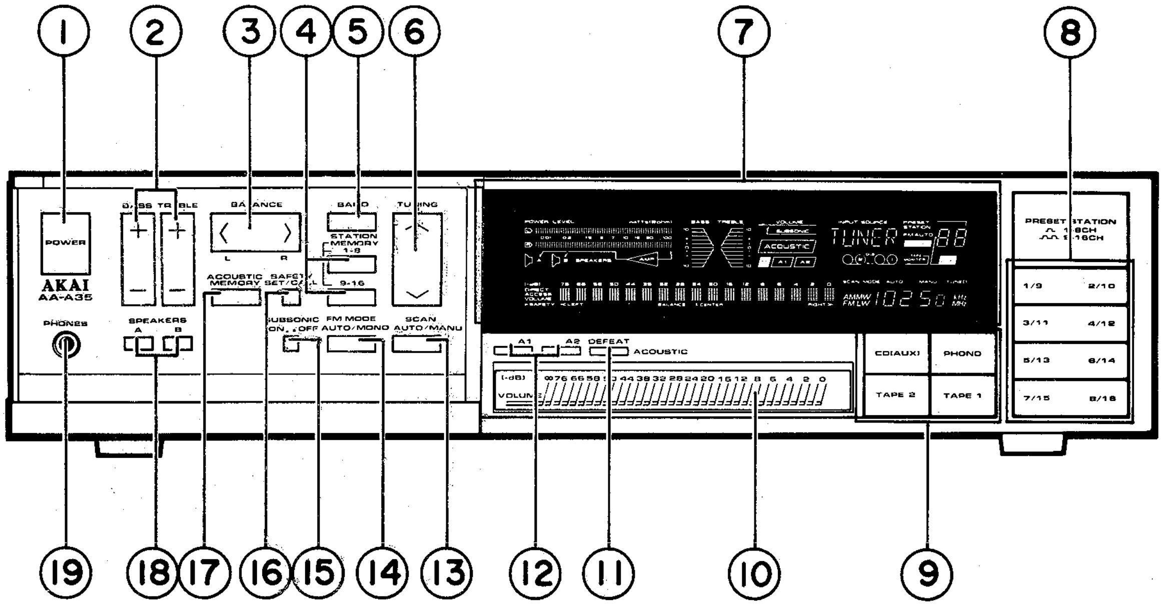

1
2
3
4
5
6
7
8
POWER
AKAI
AA-A35
BASS
TREBLE
BALANCE
BAND
TUNING
STATION MEMORY
1-8
9-16
ACOUSTIC MEMORY
SAFETY SET/CALL
SUBSONIC ON OFF
FM MODE AUTO/MONO
SCAN AUTO/MANU
PHONES
SPEAKERS A B
A1
A2
DEFEAT
ACOUSTIC
VOLUME
PRESET STATION
1/9
2/10
3/11
4/12
5/13
6/14
7/15
8/16
CD(AUX)
PHONO
TAPE 2
TAPE 1
TUNER
19
18
17
16
15
14
13
12
11
10
9

Fig. 3-1 Front View

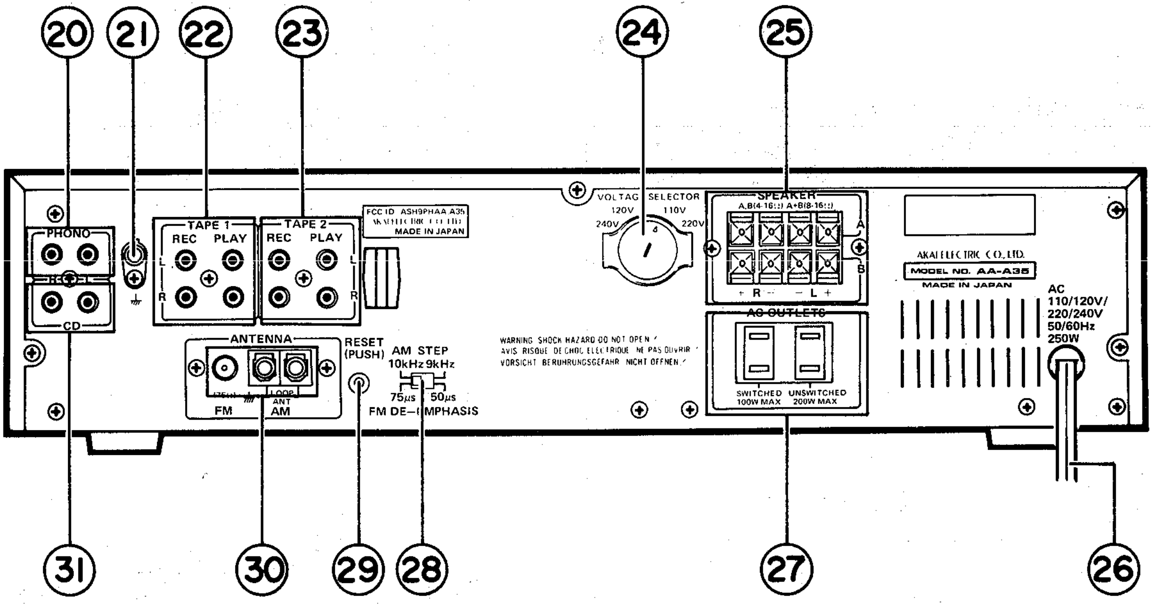

20
21
22
23
24
25
PHONO
CD
TAPE 1
TAPE 2
REC
PLAY
FCC ID ASH9PHAA A35
MADE IN JAPAN
VOLTAGE SELECTOR
120V
110V
240V
220V
SPEAKER
A
B
AC OUTLETS
SWITCHED 100W MAX
UNSWITCHED 200W MAX
AKAI ELECTRIC CO.,LTD.
MODEL NO. AA-A35
MADE IN JAPAN
AC 110/120V/ 220/240V 50/60Hz 250W
ANTENNA
FM
AM
LOOP ANT
RESET (PUSH)
AM STEP
10kHz 9kHz
75μs 50μs
FM DE-EMPHASIS
WARNING: SHOCK HAZARD-DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR
VORSICHT: BERUHRUNGSGEFAHR-NICHT OFFNEN
31
30
29
28
27
26

Fig. 3-2 Rear View

1. POWER SWITCH
2. TONE CONTROL (BASS, TREBLE) BUTTONS
3. BALANCE BUTTON
4. STATION MEMORY (1 to 8 & 9 to 16) BUTTONS
5. BAND SELECTOR (FM, AM(MW), LW) BUTTON
6. TUNING CONTROL BUTTON
7. FL DISPLAY
8. PRESET STATION BUTTONS
9. INPUT SOURCE SELECTOR BUTTONS (CD(AUX), PHONO, TAPE 1, TAPE 2)
10. DIRECT ACCESS VOLUME CONTROL
11. DEFEAT BUTTON
12. ACOUSTIC MEMO A1 and A2 BUTTONS
13. SCAN AUTO/MANU SELECTOR BUTTON
14. FM MODE AUTO/MONO BUTTON
15. SUBSONIC FILTER SWITCH
16. SAFETY SET/CALL BUTTON
17. ACOUSTIC MEMORY BUTTON
18. SPEAKER SELECTORS (A and B)
19. PHONES JACK
20. PHONO JACKS
21. GROUND TERMINAL
22. TAPE 1 (REC/PLAY) JACKS
23. TAPE 2 (REC/PLAY) JACKS
24. VOLTAGE SELECTOR ($\boxed{\text{U}}$ mode only)
25. SPEAKER TERMINALS (A and B)
26. AC POWER CORD
27. AC OUTLETS
28. AM STEP/FM DE-EMPHASIS SELECTOR ($\boxed{\text{U}}$ model only)
29. RESET BUTTON
30. ANTENNA TERMINALS
31. CD(AUX) JACKS

IV. PRINCIPAL PARTS LOCATION

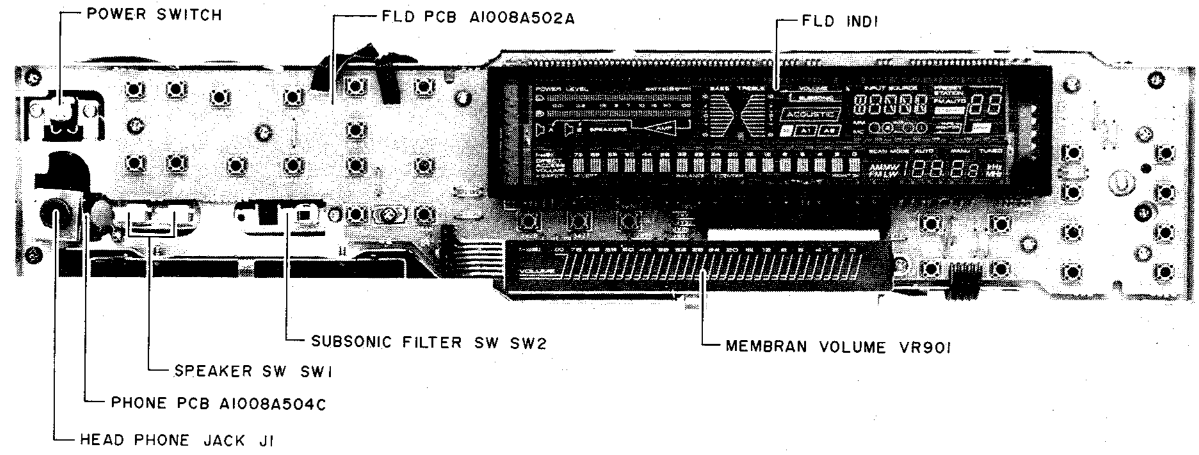

POWER SWITCH
FLD PCB A1008A502A
FLD IND1
SUBSONIC FILTER SW SW2
MEMBRAN VOLUME VR901
SPEAKER SW SW1
PHONE PCB A1008A504C
HEAD PHONE JACK J1

Fig. 4-1 Front View

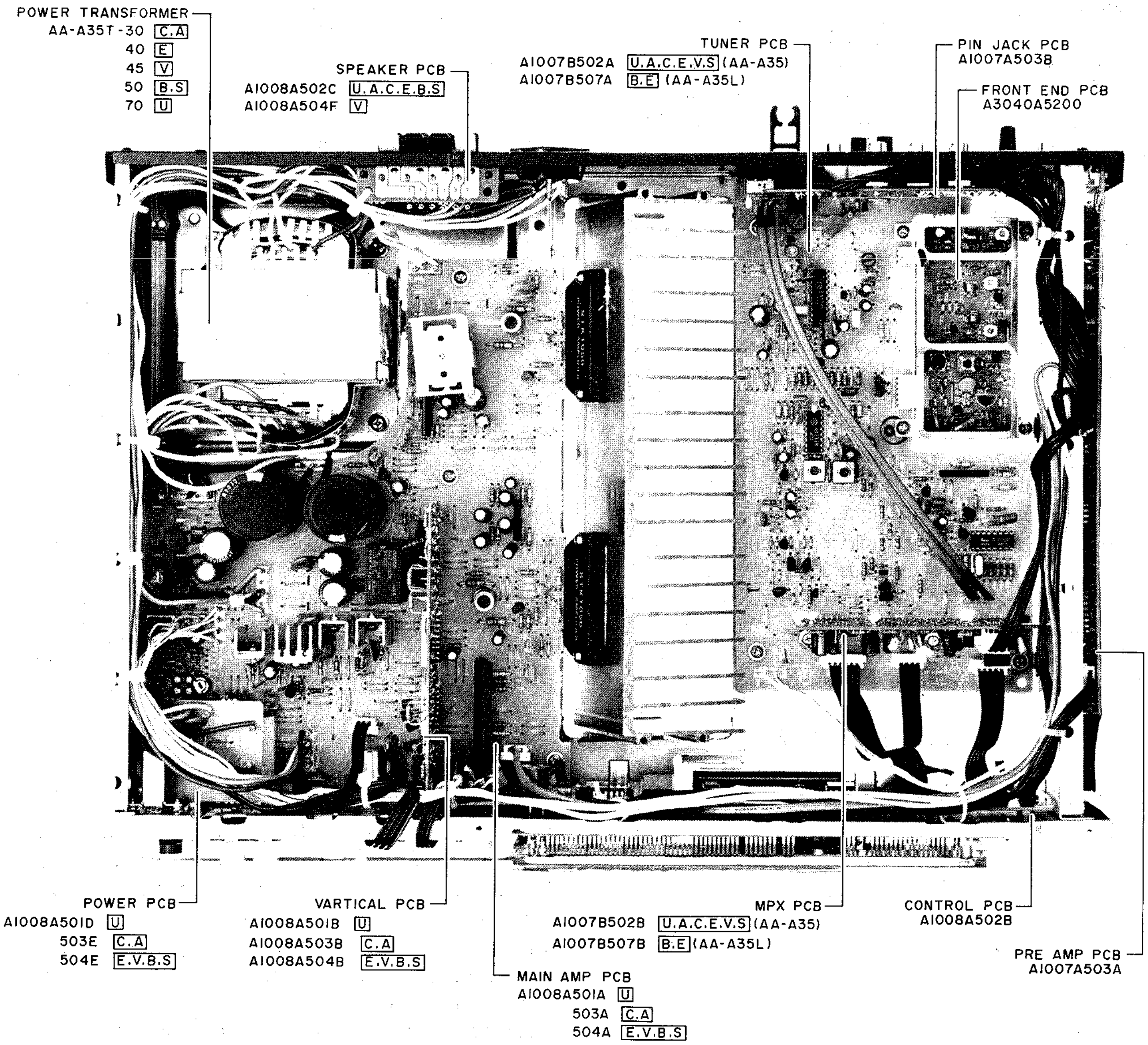

POWER TRANSFORMER
AA-A35T-30 C.A
40 E
45 V
50 B.S
70 U
SPEAKER PCB
A1008A502C U.A.C.E.B.S
A1008A504F V
TUNER PCB
A1007B502A U.A.C.E.V.S (AA-A35)
A1007B507A B.E (AA-A35L)
PIN JACK PCB
A1007A503B
FRONT END PCB
A3040A5200
POWER PCB
A1008A501D U
503E C.A
504E E.V.B.S
VARTICAL PCB
A1008A501B U
A1008A503B C.A
A1008A504B E.V.B.S
MPX PCB
A1007B502B U.A.C.E.V.S (AA-A35)
A1007B507B B.E (AA-A35L)
CONTROL PCB
A1008A502B
PRE AMP PCB
A1007A503A
MAIN AMP PCB
A1008A501A U
503A C.A
504A E.V.B.S

Fig. 4-2 Top View

V. DESCRIPTION OF THE CIRCUIT OPERATION

5-1 AMPLIFIER PERFORMANCE

5-1-1 General Description

(1) Functions

a) Input Selector Control
This microcomputers is capable of controlling analog switch TC9164N that serves as the input selector. Three input systems that include PHONO, CD, and TUNER, and two monitoring systems that include TAPE 1 and TAPE 2 may be controlled.

b) Direct Access Volume Control
Reads voltages detected out of the sound-volume touch control through an A/D converter, and sets the electronic potentiometer in accordance with the read data. In this process, any designated setting will be reached from the earlier potentiometer position by fading in or out.

c) Balance Control
By setting various level differences between Lch and Rch on the main control, up to a maximum of 30dB L-R level offsets may be created.

d) Tone (BASS/TREBLE) Control
Operates the tone control potentiometer (TC9156P) in 2dB steps up to a maximum of ±10dB, and thereby performs as an electronically controlled tone circuit.

f) Acoustic Pattern Storage
By this function, stores in the microcomputer two patterns of the tone control circuit settings, and enables the instant loading of either of the stored patterns.

g) Volume Control Safety Function
With the touch control operated direct access sound volume system that enables the instant setting of any preferred sound volume level, the danger exists that the inadvertent touch of a higher position of the control will cause a sudden emission of unexpectedly high sounds from speakers. A time lag measure in the form of fade-in's has been provided to enable coping with the above danger, but as an added and positive precaution, this safety function has been added on that suppresses all sounds louder than a level set in advance.

h) TUNER Direct Function
This function will set the input selector at TUNER upon receiving data from the microcomputer (A1007T) for the tuner that is output as soon as the tuner has been operated.

5-1-2 Key Input and Dynamic FL Display Strobes

Key inputs and FL displays are both handled dynamically, and their basic clock signals generated by the ITMR interrupt (1,024 Hz) for the output of strobe signals.

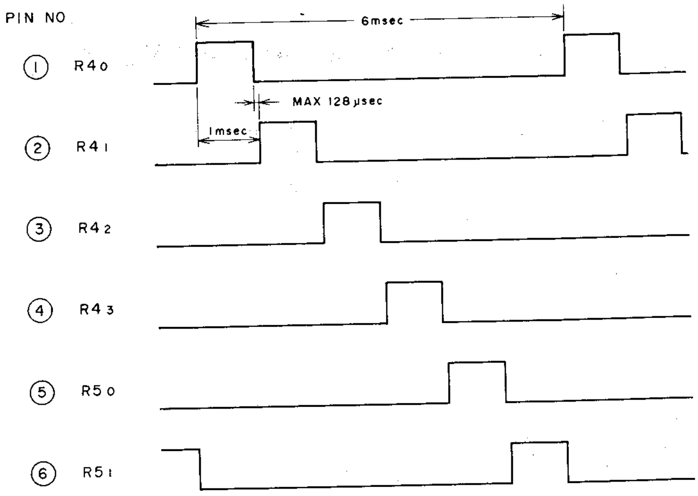


Fig. 5-1

5-1-3 Acceptance of Key Inputs

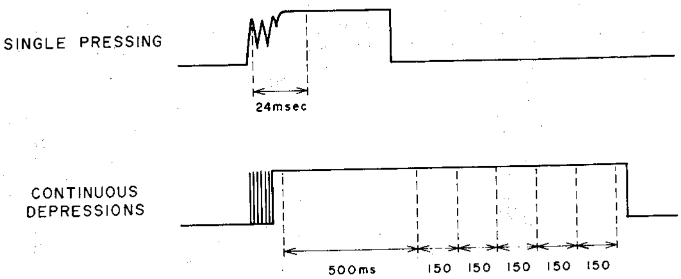


Fig. 5-2

- Chatterings will be absorbed for 24 msec.
- Continuous depressions will be accepted first at 24 msec after the depression start, second at 500 msec after the first, and then at every 150 msec thereafter.
- All multiple depressions shall be inhibited. Once a multiple depression is made, no key inputs will be accepted until after all of the depressed keys have been released.

5-1-4 Key Processings

(1) [PHONO], [CD]

Sets the input selector (TC9164N) for either of the input modes keyed in, and makes due indications for it. Nothing, however, will occur when the depressed key mode has already been engaged.

When either TAPE 1 or TAPE 2 has been keyed on, the displays for a tape monitored input will be flashed on and off for 10 times at a 1/2 duty and once every second, to alert the operator of the ongoing tape monitoring. In addition, when serial data is being transferred to the analog switch, the electronic potentiometer will be muted, to prevent the leakage of switching noises to the output circuit. (The AA-A35/L has no "TUNER" key, but the necessary input selection will be made by command data from the micro-computer (A1007T) incorporated in the tuner.)

(2) **[TAPE 1], [TAPE 2]**

Each single pressing of either key will switch its monitoring status between ON and OFF from one to the other, and its indication also turn ON and OFF accordingly. In addition, during the transfer of serial data to the analog switch, the electronic potentiometer will be muted to prevent the leakage of switching noises to the output.

This, however, does not apply to TAPE 1 key operations with TAPE 2 in an ON mode.

(3) **[VOLUME]**

When the sound volume display is being made, either fades the sound volume display is being made, either fades in or fades out to the touched position from an immediately preceding level. The phasing speed will be 2 dB per 60 msec. However, when the touched position is above the "Safety" engaged position, the foregoing operation will be made only up to that "Safety" position. As for the display, the touched position (within the "Safety" range) will instantantly be displayed upon touching.

When either the Balance or the Safety Level is being displayed, the display will be switched to the Volume. Operations thereafter will conform with the above process.

(4) **[BALANCE L], [BALANCE R]**

When the Balance is being displayed, data will be transferred to provide the designated level offsets between Lch and Rch of the electronic potentiometer, and the display will also synchronize therewith. When continuously depressed, however, the potentiometer setting will start varying at 500 msec after the depression start, and will thereafter vary at 2 dB per 150 msec, but linger for 750 msec at the center position when passing through it. (The display will vary at 2 dB per step in the immediate vicinity of the center position, but at 4 dB per step in all other areas.)

When these keys are pushed while either the Volume or the Safety Level is being displayed, the display will be switched to the Balance.

(5) **[SAFETY]**

- When either the Volume or Balance position is being displayed:
  A single press of the key will first have the Safety Level position at the time displayed. This display will revert to the Volume position display 5 seconds later, but if the Safety key is depressed continuously for one second or longer, the display will be switched to that of the Volume, and the Safety indicator will flash on and off every second at a 1/2 duty. This signifies a Safety changing mode to have been engaged, where any Volume level up to Max may be selected, and the mode will be sustained for one minute. In other words, the one minute after the beginning of the Safety flashing represents a Safety Level setting time duration.
- When the Safety indicator is flashing on and off:
  The Volume position touched in this duration will be set as the Safety Level that represents the sound volume level not be exceeded by any subsequent acoustic output. As long as the Safety Level set is other than the maximum potentiometer position, the Safety indicator will be lit steadily, but when it is at the maximum position, the indicator will go off.

(6) **[BASS+], [BASS−], [TREBLE+], [TREBLE−]**

Each single pressing of one of these keys will either raise or lower the electronic potentiometer for either BASS or TREBLE. When it is depressed continuously, the first potentiometer up/down shifting operation will be performed when 500 msec have elapsed since the depression start, and the subsequent operation at the rate of 150 msec per step. When the shifting passes through the center position, it will linger there for 750 msec before moving further on. The display will also vary conforming with individual key operations.

(7) **[DEFEAT]**

Restores the BASS/TREBLE positions all at the center, regardless of their earlier potentiometer positionings.

(8) **[MEMO]**

Engages an acoustic pattern storage standby mode. At this time, the ACOUSTIC MEMO indicator will turn on, and the A1 and A2 indicators flash on and off for 10 times at a 1/2 duty in 1-second cycles (at 1 Hz).

Even before 5 seconds are up, the standby mode may be disengaged by pushing any other key than [A1] and [A2].

(9) **[A1], [A2]**

- When at Standby for Acoustic Pattern Storage:
  Stores the current BASS/TREBLE positions in the memory, and will disengage the storage standby mode.
- When in any other mode than Acoustic Pattern Storage Standby:
  Loads the stored BASS/TREBLE positions, that is, sets the potentiometers instantly at those positions and their displays at the same time.

5-1-5 Input Selector Analog Switch (TC9164N)

Controls the electronic potentiometer (TC9176P) and the tone potentiometer (TC9156P).

(1) Serial Data Structure

The serial data is composed of 3 parallel bits that include DATA, CK, and ST, and the numbers of serial bits of the individual potentiometers have been made as follows:

TC9164N → 14 bits
TC9176P → 20 bits
TC9156P → 18 bits

Control lines DATA and CK for the TC9176P and TC9156P have been made common with control lines ST-WR and CE for A/D converter LC7910, because A/D conversion and data transfers to the potentiometers will never occur simultaneously, and no changes in the status of potentiometers will take place as long as no ST are issued.

[Data Timing Schematic Diagram]

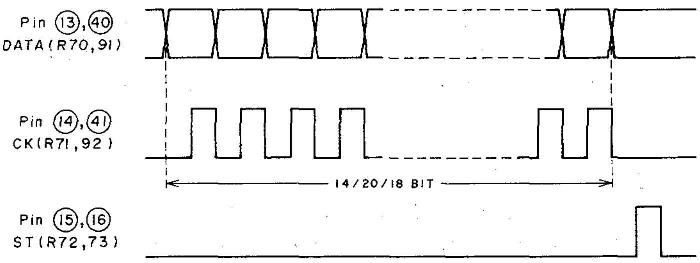


Fig. 5-3

(2) Data Buffers

Data buffers for the TC9146N are formed in RAMs MFSRD0 through MFSRD3, and those for the TC9176P and TC9156P in RAMs MVSRD0 through MVSRD4. Their allocation charts are shown in Tables 5-1 to 5-3.

a) Buffers for the Input Selector Switch (TC9164N)

MFSRD3	MFSRD2	MFSRD1	MFSRD0	
Unused PHONO CD TUNER	SOURCE 1 TAPE1 PB SOURCE 2 TAPE2 PB	L R	C_1 C_2 C_3 C_4	
0	0 1 1 0	1 1	0 1 0 0	⟶ Fixed Data

ON OFF

Table 5-1

Bits 2 and 3 of MFSRD1 will not be transmitted.

b) Buffers for the Master Potentiometer (TC9176P)

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0	
L R 0	2 4 6 8	0 10 20 30	40 50 60 70	C_1 C_2 C_3 C_4	
0				0 0 0 1	⟶ Fixed Data

Table 5-2

c) Buffers for the Tone Potentiometer (TC9156P)

MVSRD4	MVSRD3	MVSRD2	MVSRD1	MVSRD0	
+5 +4 +3 +2	+1 0	1 −2 −3 −4	−5 L	R C_1 C_2 C_3	
	0 0		1	1 0 1 0	⟶ For BASS
	0 0		1	1 1 0 0	⟶ For TREBLE

Table 5-3

5-2 TUNER PERFORMANCE

5-2-1 General Description

(1) Functions

a) 20-Ch or 16-Ch Random Presetting of Stations
When initialized, discrimates between A45 and A35/25, and against A45, enables 10 stations each front (1 to 10) and back (11 to 20) or a total of 20 stations to be preset, while against A35/25, enables 8 stations each front (1 to 8) and back (9 to 16) or a total of 16 stations to be preset. The presetting permits the random storage of station data irrespective of band, and for FM stations, the MONO/STEREO segregating data will also be contained in the storage.

b) Two Tuning Styles: AUTO and MANUAL
The AUTO Scan Tuning that once the UP/DOWN key is pushed, will continue scanning until a station is captured, and once it is captured, will stop scanning, and the MANUAL Tuning that will scan only when the key is held down, and when it is released, will stop scanning, are the two tuning styles enabled.
(LW is shifted in 1K steps for MANUAL and 9K steps for AUTO.)

c) Switching of MONO and STEREO Receiving Modes
The MONO/STEREO mode switching function has been incorporated for FM reception, and is also included in the stored station presetting data.

5-2-2 Acceptance of Key Input

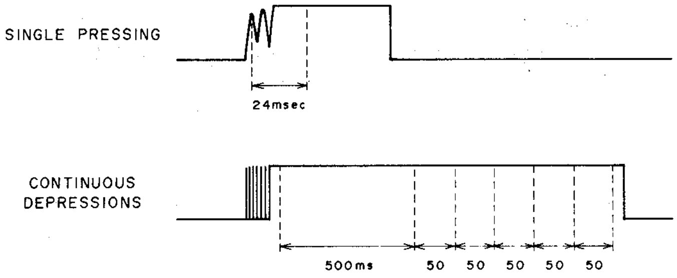


Fig. 5-4

- Chatterings will be absorbed for 24 msec.
- Continuous depressions will be accepted first at 24 msec after the depression start, second at 500 msec after the first, and then at every 50 msec thereafter.
- All multiple depressions shall be inhibited. Once a multiple depression is made, no key inputs will be accepted until after all of the depressed keys have been released.

5-2-3 Initial Setting (RST Mode)

a) FL Display:

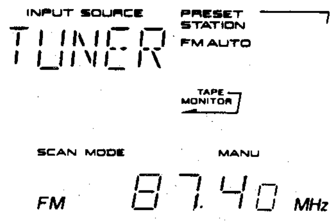


Fig. 5-5

b) The received frequency will be at the lowest in the FM band for each destination:
c) The mode will be STEREO (FM AUTO).
d) The scan mode will be MANUAL.
e) All the preset channels will be at the lowest FM frequency.
f) The last frequencies of individual bands of the tuner will be the lowest frequencies.

5-2-4 Status in a Backup Mode

Basically, the status immediately before engaging the backup will all be sustained, but slight deviations will be involved, as listed below.

a) When a backup mode is engaged during AUTO SCAN, the scanning will stop.
b) When a backup mode is engaged in a storage standby mode, the standby will be disengaged.
c) The pre-backup status will be sustained for about 3 weeks.

5-2-5 Active and Non-Active Modes at Tuner

(1) Active Mode

This is a mode after the data has been transmitted to the microcomputer (A1007A) of AMP to have the input selector of AMP switched to TUNER, that is, a mode where all the tuner performance has been enabled.
The data for the microcomputer of AMP will be transmitted from port $R4_1$ (A1007T Pin ②) when the BAND, UP/DOWN, and Preset CH keys have been pushed, and its timing will be as illustrated below.

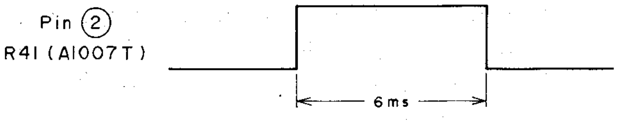


Fig. 5-6

(2) Non-Active Mode

This is a mode where the tuner performance has been partially constrained. It is engaged by detecting an [H] level of the line connected to $R7_2$ (A1007T Pin 15) of the subject microcomputer, which has been brought about by the microcomputer of AMP in switching the input selector of AMP to other than TUNER, either PHONO or CD, and by juding the tuner thereby not to be listened to.

Relative to the display, the frequency display will be extinguished, and bars displayed instead, to signify a non-active mode.

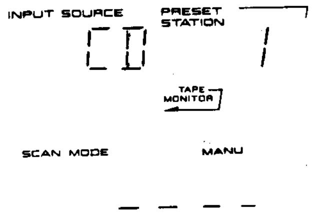

INPUT SOURCE
PRESET STATION
CD
1
TAPE MONITOR
SCAN MODE
MANU
- - - -

Fig. 5-7

Relative to the operating performance, will accept only the BAND, UP/DOWN, and Preset CH keys, and reject all the other keys.

5-2-6 Auto-Tuning

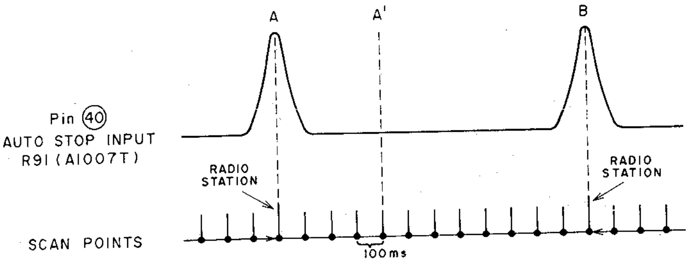

A
A'
B
Pin ㊵
AUTO STOP INPUT
R91 (A1007T)
RADIO STATION
RADIO STATION
SCAN POINTS
100ms

Fig. 5-8

The starting point in auto tuning modes may either be a broadcast receiving point or a point where no broadcast is received.

Since stopping the scan merely at an [H] level of the auto-stop signal may therefore cause nonconformities, the process employed is to stop scanning only when the auto-stop signal has first dropped to an [L] level after the scanning start and then has climbed to an [H] level.

The scanning speed is about 100 msec per step. The step will be a single channel spacing in the receiving band that varies by destination. Auto-scanning of LW, however, is an exception to this rule and 9 kHz steps have been assigned to it, where fixed points 9N+2 or 9N (N = an integer) will be scanned.

In other words, against any given point selected earlier by a manual scan, the scanning start when an auto-scanning mode is engaged will always be at a point 9N+2 or 9N.

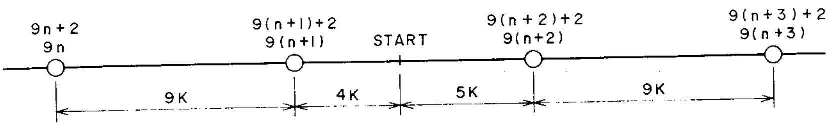

9n+2
9n
9(n+1)+2
9(n+1)
START
9(n+2)+2
9(n+2)
9(n+3)+2
9(n+3)
9K
4K
5K
9K

Fig. 5-9

5-2-7 Tuner Output Muting

This microcomputer will mute the tuner signal when the BAND data or PLL data is changed by the [BAND], [UP], [DOWN], [MODE], or Preset CH key, or when the receiving mode is changed.

In the muting process, when 50 msec have elapsed since the initial muting start, data transfer and other processings will be made, and then, 450 msec after these processes have been concluded, the muting will be disengaged. We will call the initial part "pre-muting" and the latter trailing part "after-muting".

The diagram below illustrates the above arrangement.

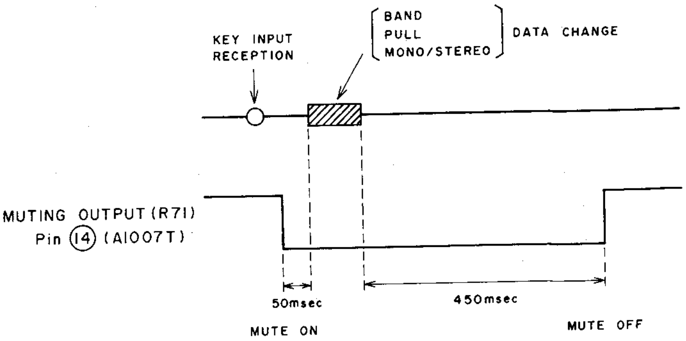

KEY INPUT RECEPTION
BAND
PULL
MONO/STEREO
DATA CHANGE
MUTING OUTPUT (R71)
Pin ⑭ (A1007T)
50msec
450msec
MUTE ON
MUTE OFF

Fig. 5-10

As exceptional cases, when an earlier muting process is still ongoing upon receipt of another key input, the 50 msec pre-muting will be omitted.

5-2-8 Key Processing

(1) [BAND]

Each single press of this key will switch the band. The selecting sequences will be as follows:

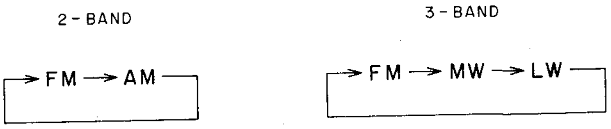

2-BAND
FM → AM
3-BAND
FM → MW → LW

Fig. 5-11

(2) [UP], [DOWN]

In a manual scan mode, each single pressing of either of these keys will shift the receiving frequency by a step, and its continuous depression will have the band scanned at 50 msec per step. In a AUTO scan mode, the band will be scanned at 100 msec per step until a station is captured, at which time an auto-stop of the scanning will be exercised. In an auto-scan mode, as soon as any other key than [UP] and [DOWN] is pushed, the scanning will be stopped at that point.

(3) Preset CH Key

a) When the Tuner is in an Active Mode:

Except when at standby for storage, a single pressing of one of the preset channel keys will load the front (1 to 8) and back (9 to 16) side channels under that key alternately, and the FLD will display the number of the channel thus loaded.

When at standby for storage, the frequency currently being received will be stored in either the front (1 to 8) or back (9 to 16) side memory until under the key that has been pushed, and the storage standby mode will then be disengaged.

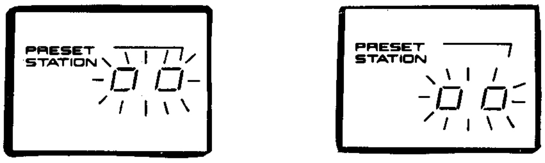
b) When the Tuner is in a Non-Active Mode:

A push of one of the keys will have the front side preset channel (1 to 8) under that key loaded, and have data transmitted to the microcomputer of AMP to switch the input selector of AMP to TUNER.

However, when in the last active mode of the tuner, a back side (9 to 16) channel had been listened to, and that channel key is now pushed, the loading effected will not be that of the front side (1 to 8) but of the back side (9 to 16) channel.

(4) [MEMO 1 – 8], [MEMO 9 – 16]

These are the keys for storing a channel frequency data in the Preset CH, and used for channels 1 to 8 and 9 to 16, respectively. Specifically, when either of the keys is pushed, the MEMO Indicator will be lit, and the channel number display flashed on and off, to alert the operator as to which side of the Preset CH key, 1 to 8 or 9 to 16, is being operated.


For 1 to 8:

For 9 to 16:

Fig. 5-12

The above mode will be sustained for 5 seconds, and the flashing repeated for 10 times at a 1/2 duty. When, however, the Preset CH key is pushed for data storage, or when any other key is pushed, the storage standby mode will be instantly disengaged.

When the tuner is in a non-active mode, nothing will occur.

(5) [MODE]

Each single pressing of this key will switch the FM reception between MONO and STEREO from one to the other.

When the tuner is in a non-active mode, nothing will occur.

(6) [SCAN MODE]

Each single pressing of this key will switch the scan mode between AUTO and MANUAL from one to the other, and due indications made at the same time.

VI. AMPLIFIER SECTION ADJUSTMENT

6-1 THE INSTRUMENT CONNECTION

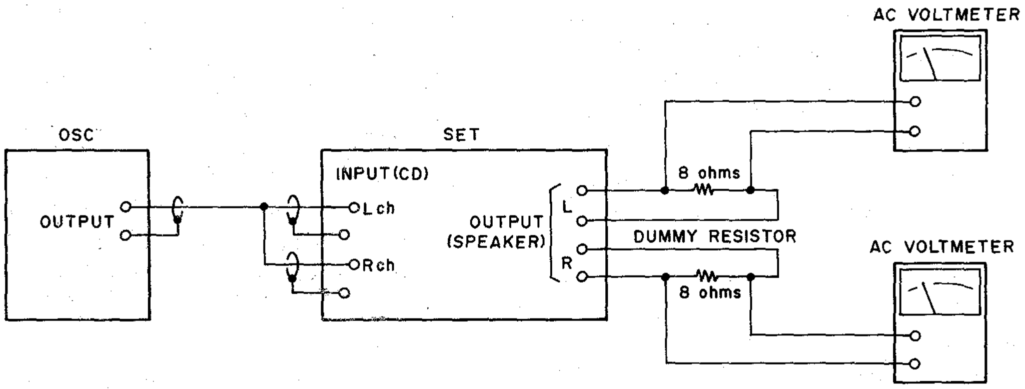

AC VOLTMETER
OSC
SET
INPUT (CD)
OUTPUT
Lch
Rch
OUTPUT (SPEAKER)
L
R
8 ohms
DUMMY RESISTOR
8 ohms
AC VOLTMETER

Fig. 6-1 Instrument Connections for Amplifier Section Adjustment

6-2 MAIN AMP PC BOARD ADJUSTMENT POINTS

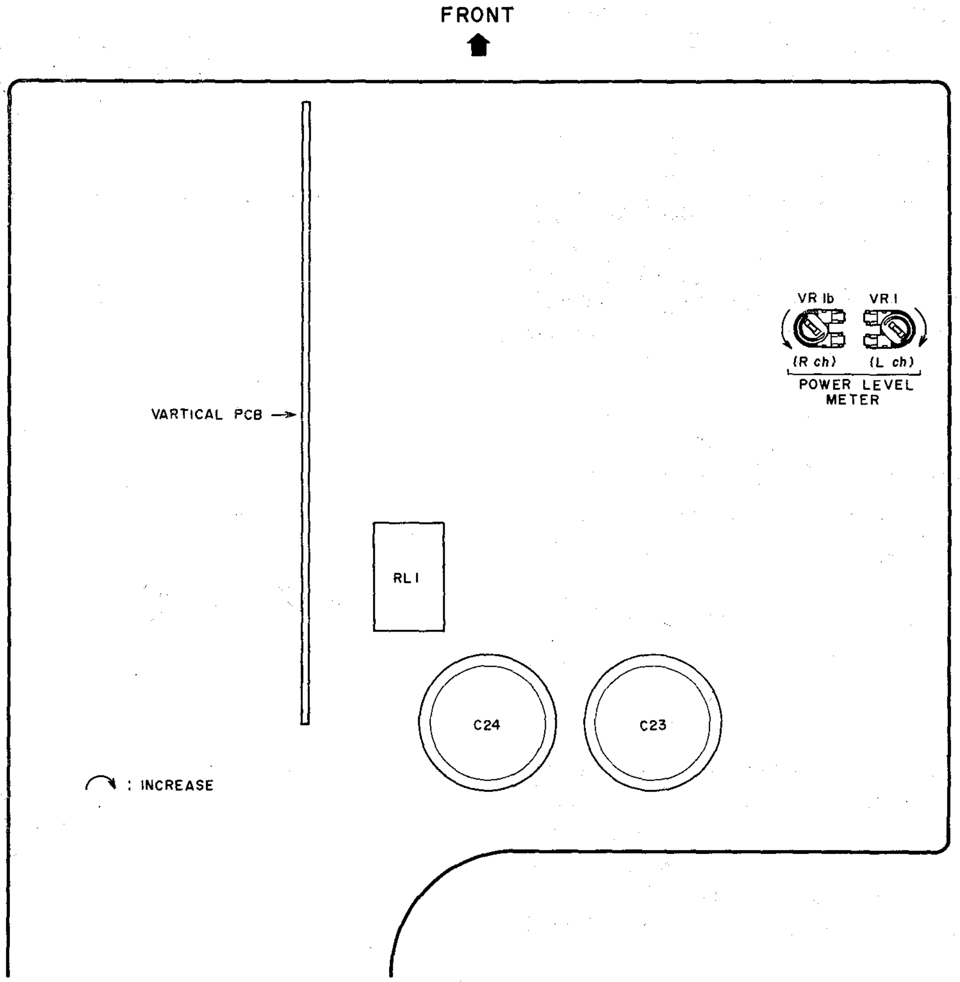

FRONT
VR Ib
VR I
(R ch)
(L ch)
POWER LEVEL METER
VARTICAL PCB
RL I
C24
C23
: INCREASE

Fig. 6-2 Main-Amp PCB

6-3 POWER LEVEL METER ADJUSTMENT

Set DIRECT ACCESS VOLUME (MEMBRAN VOLUME) to maximum and TONE control to flat.

Supply 1 kHz to CD input jacks (both left and right CH) and adjust OSC output so that the AC voltmeters indicate 15.5V. AdjustVR1 so that the POWER LEVEL meter indicates 30W.

VII. TUNER ADJUSTMENT

7-1 THE INSTRUMENT CONNECTIONS

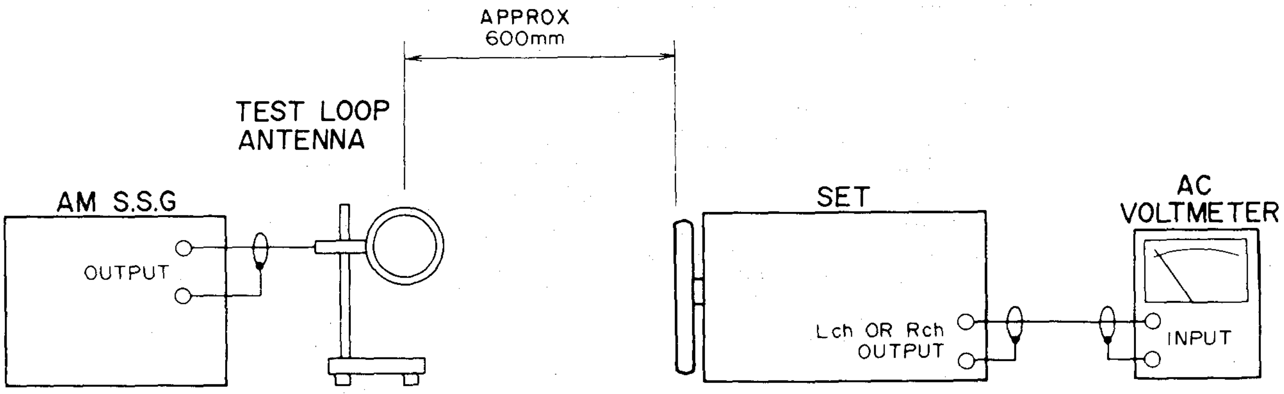

APPROX
600mm
TEST LOOP
ANTENNA
AM S.S.G
OUTPUT
SET
Lch OR Rch
OUTPUT
AC
VOLTMETER
INPUT

Fig. 7-1 Instrument Connections for AM(MW, LW) Section Adjustment

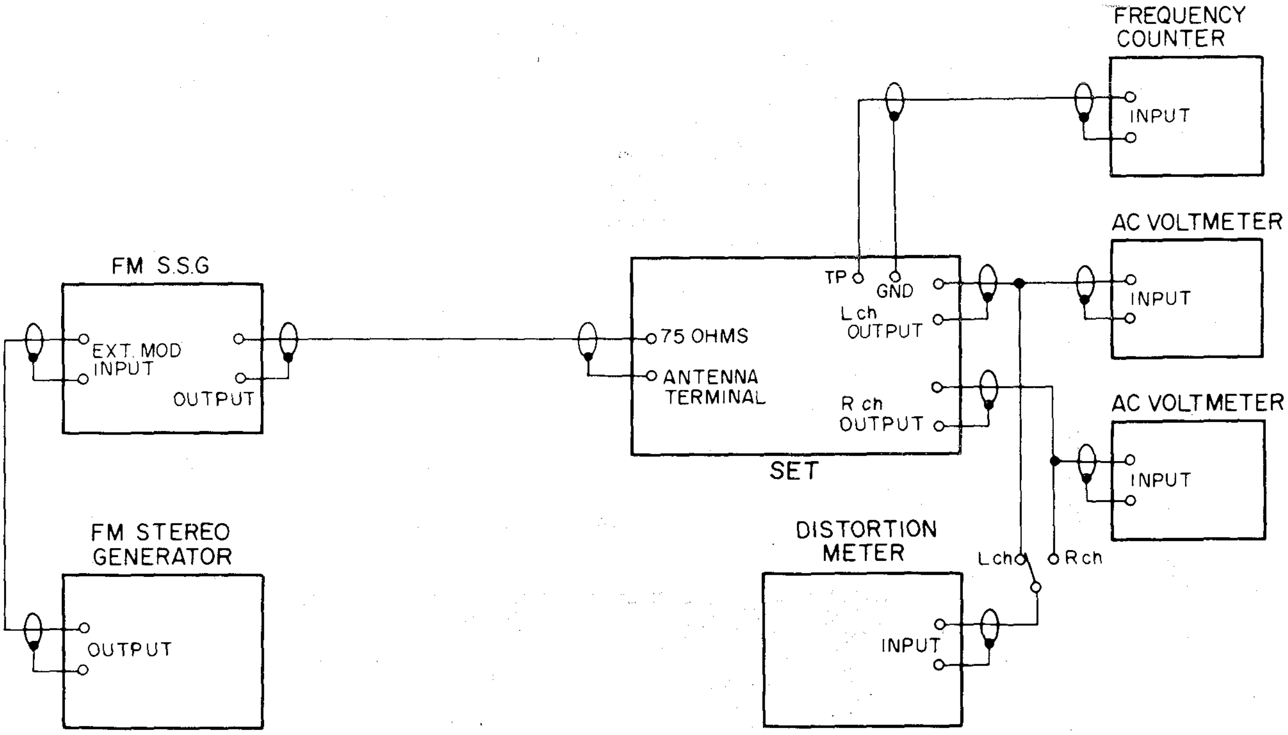

FREQUENCY
COUNTER
INPUT
AC VOLTMETER
INPUT
AC VOLTMETER
INPUT
FM S.S.G
EXT. MOD
INPUT
OUTPUT
TP
GND
Lch
OUTPUT
75 OHMS
ANTENNA
TERMINAL
R ch
OUTPUT
SET
FM STEREO
GENERATOR
OUTPUT
DISTORTION
METER
INPUT
Lch
Rch

Fig. 7-2 Instrument Connections for FM Section Adjustment

7-2 TUNER, FRONT END, MPX PC BOARD ADJUSTMENT POINTS

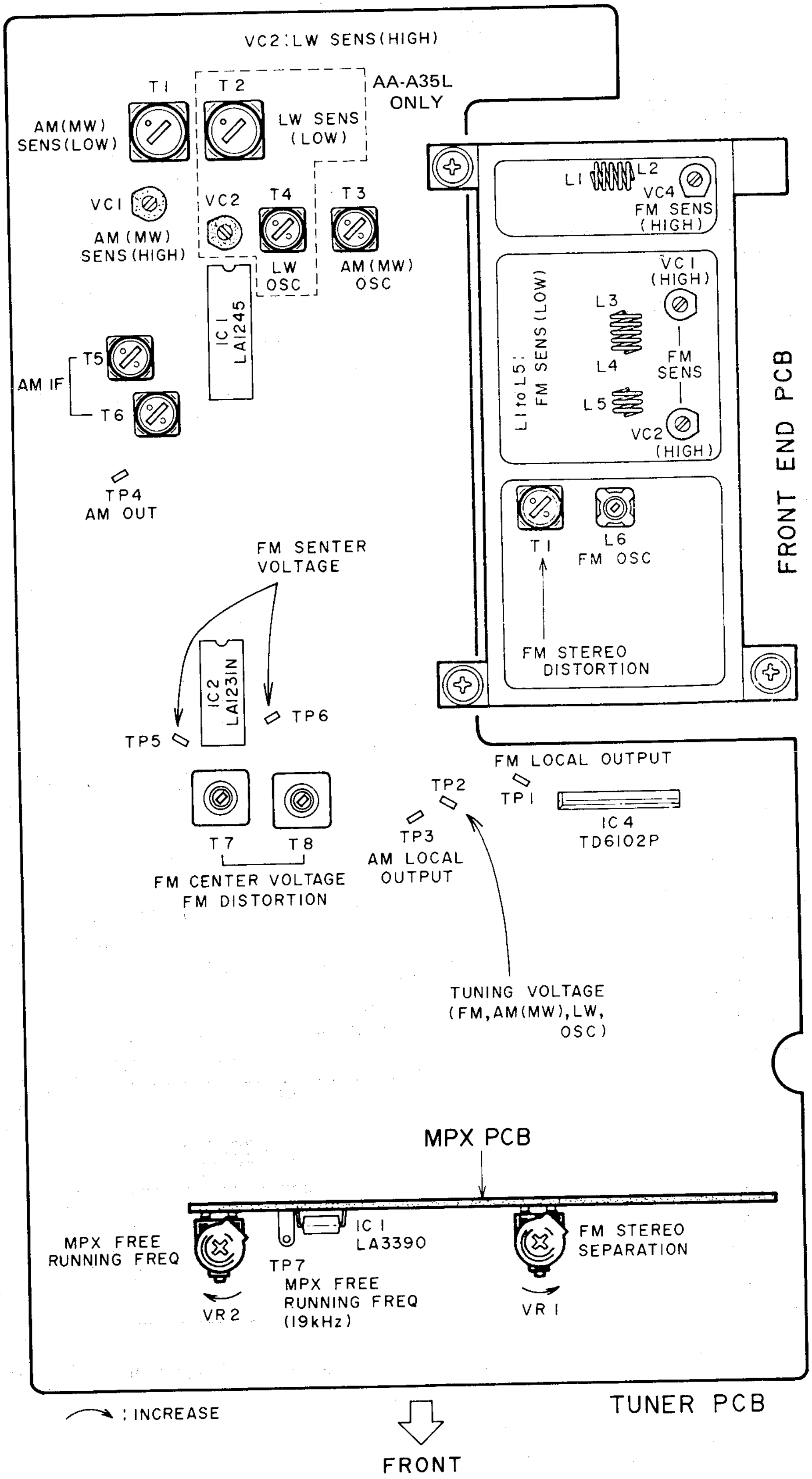

VC2 : LW SENS (HIGH)
T1
T2
AA-A35L ONLY
AM (MW) SENS (LOW)
LW SENS (LOW)
VC1
VC2
T4
T3
AM (MW) SENS (HIGH)
LW OSC
AM (MW) OSC
IC1 LA1245
T5
AM IF
T6
TP4 AM OUT
FM SENTER VOLTAGE
IC2 LA1231N
TP5
TP6
T7
T8
FM CENTER VOLTAGE FM DISTORTION
L1
L2
VC4
FM SENS (HIGH)
VC1 (HIGH)
L3
L4
L5
L1 to L5: FM SENS (LOW)
FM SENS
VC2 (HIGH)
T1
L6
FM OSC
FM STEREO DISTORTION
FRONT END PCB
FM LOCAL OUTPUT
TP2
TP1
TP3
AM LOCAL OUTPUT
IC4 TD6102P
TUNING VOLTAGE (FM, AM (MW), LW, OSC)
MPX PCB
MPX FREE RUNNING FREQ
IC1 LA3390
TP7
MPX FREE RUNNING FREQ (19kHz)
FM STEREO SEPARATION
VR2
VR1
: INCREASE
TUNER PCB
FRONT

Fig. 7-3

7-3 HOW TO CALL THE PRESET FREQUENCY FOR THE TUNER ADJUSTMENT

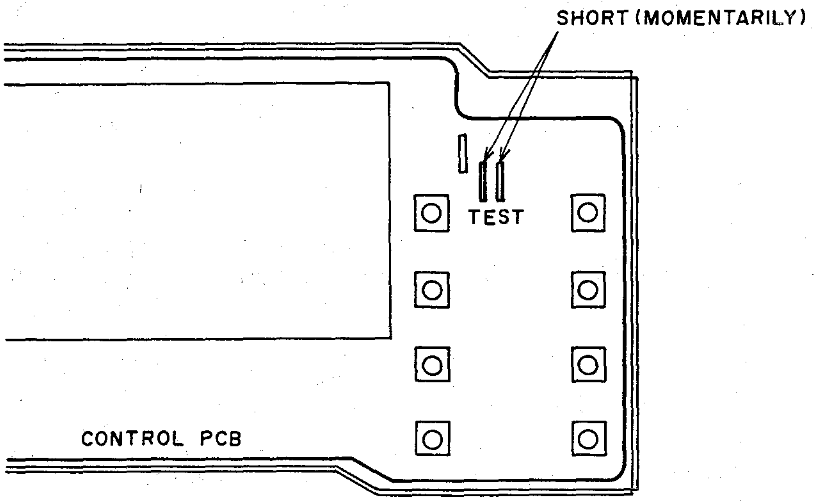


Fig. 7-4

Tuner preset frequencies for adjusting RF, IF and FM demodulator are able to preset as follows insted of operating TUNING control button to get the test frequencies from Signal Generator.

Short-circuit momentarily two test points shown in Fig. 7-4. Then select required test frequency by pushing one of the Preset Station buttons according to Chart 7-1.

		PRESET STATION CH							
	Buttons CH	1/9	2/10	3/11	4/12	5/13	6/14	7/15	8/16
USA & CANADA	1 to 8	AM 600kHz	AM 1000kHz	AM 1400kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 to 16	AM 530kHz	AM 1000kHz	AM 1611kHz	FM 87.4MHz	FM 90.0MHz	* FM 98.0MHz	FM 106.0MHz	FM 108.1MHz
EUROPE 3 BAND	1 to 8	MW 603kHz	MW 999kHz	MW 1404kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 to 16	MW 522kHz	MW 999kHz	MW 1611kHz	LW 146kHz	LW 160kHz	LW 200kHz	LW 300kHz	LW 353kHz
EUROPE 2 BAND UNIVERSAL AREA	1 to 8	AM 603kHz	AM 999kHz	AM 1404kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 to 16	AM 522kHz	AM 999kHz	AM 1611kHz	FM 87.4MHz	FM 90.0MHz	* FM 98.0MHz	FM 106.0MHz	FM 108.1MHz

* = FM AUTO

Chart 7-1

NOTE: For U model only, set AM STEP switch to 9kHz position, which located on the rear panel.

7-4 FM SECTION ADJUSTMENT

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	FM OSC	L6 (in FRONT END PCB)	12V at 108.1MHz	Band SW to FM 108.1MHz Mono input. Display to 108.1MHz. Connect DC Voltmeter to TP2.
2	Low Range Sensitivity	L1 to L5 (in FRONT END PCB)	Less than 10dB input from SSG	FM mode SW to Mono 90MHz, Mono input. Display to 90MHz. 3% Distortion Factor.
3	High Range Sensitivity	VC1, 2, 4 (in FRONT END PCB)	Less than 10dB input from SSG	106MHz, Mono input. Display to 106MHz. 3% Distortion Factor.
4	For best Result, Repeat Steps 2 and 3 two or three times			
5	Middle Range Sensitivity (Confirmation)	None	Less than 10dB input from SSG	98MHz, Mono input. Display to 98MHz. 3% Distortion Factor.
6	FM Center Voltage	T7, T8	0V indication	DC Voltmeter between TP5 and TP6. Tune only noise without interference from broadcasting.
7	Distortion (Mono)	T7, T8	Less than 0.3%	98MHz, 60dB, Mono input. Display to 98MHz. Confirm that the DC Voltage between TP5 and TP6 is within 0 ± 0.025V.
8	MPX Free Running Frequency	VR2 (in MPX PCB)	19kHz	98MHz, 60dB Stereo input. Display to 98MHz. Connect Frequency Counter to TP7 (in MPX PCB).
9	Stereo Separation	VR1 (in MPX PCB)	More than 38dB	98MHz, 60dB, Stereo L-CH (R-CH) input. Display to 98MHz. Minimum output of R-CH (L-CH)
10	Distortion (Stereo)	T1 (in FRONT END PCB), T7, T8	Less than 0.5%	98MHz, 60dB Stereo (L-CH or R-CH) input. Display to 98MHz. Confirm that the DC voltage between TP5 and TP6 within 0 ± 0.025V.

NOTES: 1. Set the internal modulation signal generator to 100% (75kHz dev. (in Europe) 40kHz dev.), 1kHz of each.

2. Adjust T1 (Front End), if the proper distortion (STEREO) could not obtained in step 10. (Confirm FM Sensitivity in case is turned more than a half turn).

7-5 LW SECTION ADJUSTMENT (for AA-A35L)

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	LW OSC	T4	7.0V at 353kHz	Band SW to LW. 353kHz input. Display to 353kHz. Connect DC Voltmeter to TP2.
2	Low Range Sensitivity	T2	Less than 65 dB input from SSG	160kHz input. Display to 160kHz. 10% Distortion Factor.
3	High Range Sensitivity	VC2	Less than 65dB input from SSG	300kHz input. Display to 300kHz. 10% Distortion Factor.
4	For best Result, Repeat steps 2 and 3 two or three times			
5	Middle Range Sensitivity (Confirmation)	None	Less than 65dB input from SSG	200kHz input. Display to 200kHz. 10% Distortion Factor.
6	Distortion (Confirmation)	None	Less than 2.5%	200kHz, 74dB input. Display to 200kHz.

NOTE: Set the internal modulation signal generator to 30%, 1kHz of each.

7-6 AM (MW) SECTION ADJUSTMENT

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	AM (MW) OSC (See NOTE 3)	T3	6.7V at 1400kHz (1404kHz)	Band SW to AM (MW) 1400kHz, (1404kHz) input. Display to 1400kHz (1404kHz). Connect DC Voltmeter to TP2.
2	Low Range Sensitivity	T1	Less than 60dB input from SSG	600kHz (603kHz) input. Display to 600kHz (603kHz) 10% Distortion Factor.
3	High Range Sensitivity	VC1	Less than 60dB input from SSG	1400kHz (1404kHz) input. Display to 1400kHz (1404kHz). 10% Distortion Factor.
4	For best Result, Repeat steps 2 and 3 two or three times			
5	Middle Range Sensitivity (Confirmation)	None	Less than 60dB input from SSG	1000kHz (999kHz) input. Display to 1000kHz (999kHz) 10% Distortion Factor.
6	Distortion (Confirmation)	None	Less than 2.0%	1000kHz, (999kHz) 74dB input. Display to 1000kHz (999kHz).
7	AM IF	T5, T6	Maximum output Minimum Distortion	1000kHz (999kHz) 74dB input. Display to 1000kHz (999kHz).

NOTES:
1. Set the internal modulation signal generator to 30%, 1kHz of each.
2. (kHz) in Result & Remarks indicates the test frequencies in AM 9kHz STEP area.
3. For the model AA-A35L, adjust LW OSC prior to this adjustment for the best result.

VIII. PC BOARD TITLES AND IDENTIFICATION NUMBERS

MODEL AA-A35

PC Board Title	PC Board Number	Remarks
MAIN AMP PC BOARD	A1008A501A	U
	A1008A503A	C, A
	A1008A504A	E, V, S
POWER PC BOARD	A1008A501D	U
	A1008A503E	C, A
	A1008A504E	E, V, S
PHONE PC BOARD	A1008A501C	U
	A1008A503C	C, A
	A1008A504C	E, V, S
VERTICAL PC BOARD	A1008A501B	U
	A1008A503B	C, A
	A1008A504B	E, V, S
SPEAKER PC BOARD	A1008A502C	U, C, A, E, S
	A1008A504F	V
FILTER PC BOARD	A1008A504G	V
PRE AMP PC BOARD	A1007A503A	
PIN JACK PC BOARD	A1007A503B	
FLD PC BOARD	A1008A502A	
CONTROL PC BOARD	A1008A502B	
TUNER PC BOARD	A1007B502A	U, C, A, E, V, S
MPX PC BOARD	A1007B502B	U, C, A, E, V, S
FRONT END PC BOARD	A3040A5200	

MODEL AA-A35L

PC Board Title	PC Board Number	Remarks
MAIN AMP PC BOARD	A1008A504A	
POWER PC BOARD	A1008A504E	
PHONE PC BOARD	A1008A504C	
VERTICAL PC BOARD	A1008A504B	
SPEAKER PC BOARD	A1008A504F	
PRE AMP PC BOARD	A1007A503A	
PIN JACK PC BOARD	A1007A503B	
FLD PC BOARD	A1008A502A	
CONTROL PC BOARD	A1008A502B	
TUNER PC BOARD	A1007B507A	B, E
MPX PC BOARD	A1007B507B	B, E
FRONT END PC BOARD	A3040A5200	

SECTION 2

PARTS LIST

TABLE OF CONTENTS

RECOMMENDED SPARE PARTS 25
1. TUNER PC BOARD BLOCK 26
2. FRONT END PC BOARD BLOCK 26
3. PRE AMP PC BOARD BLOCK 27
4. MAIN AMP PC BOARD BLOCK 27
5. CONTROL PC BOARD BLOCK 28
6. ASSEMBLY BLOCK 28
7. FINAL ASSEMBLY BLOCK 30
INDEX 31

Resistors and Capacitors which are not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

NO.	PARTS NO.	DESCRIPTION
1	BT-352037	⚠ TRANS POWER AA-A35T-30(C,A)
2	BT-352038	⚠ TRANS POWER AA-A35T-40(E)
3	BT-352706	⚠ TRANS POWER AA-A35T-45(V)
4	BT-352039	⚠ TRANS POWER AA-A35T-50(B,S)
5	BT-352040	⚠ TRANS POWER AA-A35T-70(U)
6	EC-352419	C S-FIX H TZ03N100E 2.1-10
7	EC-330692	C S-FIX H TZ03R200E 4.2-20
8	ED-309341	D GERMA H 1K34A
9	ED-345555	D SILICON DBB10C 200/1.0A
10	ED-348990	D SILICON H DS446
11	ED-301911	D SILICON H DS448
12	ED-344280	D SILICON H GMA-01-FY2 F05
13	ED-348836	D SILICON RB602U 200/6.0A
14	ED-348205	D SILICON V MC931 DOUBLE
15	ED-349460	D VARACTER SVC321 C,D
16	ED-336832	D VARACTER SVC211SP
17	ED-346613	D ZENER H HZ11 C3
18	ED-306320	D ZENER H HZ15 2
19	ED-323836	D ZENER H HZ16 2
20	ED-346627	D ZENER H HZ33 2
21	ED-346603	D ZENER H HZ6 A1
22	ED-306010	D ZENER H HZ6 A2
23	ED-331197	D ZENER H HZ6 C1
24	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,V,S,LE,LB)
25	EF-691007	⚠ FUSE SEMKO T 250V 3.15A (LB)
26	EF-242605	⚠ FUSE SEMKO T 250V 6.30A (E,V,S,LE,LB)
27	EF-305703	⚠ FUSE TSC 125V 0.63A (C,A)
28	EF-346115	⚠ FUSE TSC 125V 6.30A (C,A)
29	EH-337327	FILTER CE BFU459C4N 0.459MHZ (EXCEPT C,A)
30	EH-337328	FILTER CE BFU460C4N 0.46MHZ (C,A)
31	EH-338338	FILTER CE MS3GKY-A 10.700MHZ (V,LE)
32	EH-336804	FILTER CE SFE10.7MA8 10.7MHZ (U,C,A,E,S,LB)
33	EH-315407	FILTER CE SFE10.7MMKA 10.7MHZ
34	EH-343352	FILTER CE SFU459B9 0.459MHZ (EXCEPT C,A)
35	EH-343353	FILTER CE SFU460B9 0.46MHZ(C,A)
36	EH-336830	FILTER LC LP BL-34HD(V)
37	EH-341654	FILTER LC LP 42W-1001
38	EI-352041	⚠ IC STK-1050A (IC2)
39	EI-353059	IC A1007A2
40	EI-351969	IC A1007T
41	EI-345474	IC HA12002
42	EI-315799	IC HA12019
43	EI-322248	IC LA1231N
44	EI-202218	IC LA1245
45	EI-343349	IC LA3390
46	EI-337013	IC LB1290
47	EI-345765	IC LB1292
48	EI-345479	IC LC7910
49	EI-337228	IC M5218L0
50	EI-349719	IC M5218P
51	EI-344764	IC M5218P-21
52	EI-352041	IC STK-1050A
53	EI-352036	IC STK-3042AK
54	EI-336717	IC TC9125BP
55	EI-343373	IC TC9156P
56	EI-349392	IC TC9164N
57	EI-351966	IC TC9176P
58	EI-315381	IC TD6102P
59	EI-352673	OSC X'TAL HC-49/U 4.1MHZ
60	EI-327074	OSC X'TAL HC-18/U 9.000000MHZ
61	EM-352044	IND FL BG-215Z DOUBLE
62	EO-353176	COIL IFT PEGK0008B-01 455.0KHZ
63	EO-337640	COIL IFT 119AC-15533X 10.7MHZ
64	EO-202216	COIL IFT 7MC-6733C 460.0KHZ
65	EO-337598	COIL VARI 2 25A-1353-01
66	EO-337599	COIL VARI 2 25A-1354-03
67	EQ-337159	RELAY POW G4Z-2282P 2NO 24V
68	ER-326169	⚠ R FUSE ERD2FC S10 1/4W 22R0G
69	ER-328278	⚠ R FUSE ERD2FC 1/4W 10R0G
70	ES-351965	⚠ SW PUSH ESB8215V
71	ES-349070	⚠ SW SELECT YKS11-0002 02-4(U)
72	ES-352043	SW PUSH FSB-62776 1-THROW
73	ES-351964	SW PUSH SUL221A 2-THROW
74	ES-347122	SW SLIDE 00420569 2-04-2S(U)
75	ES-344445	SW TACT EVQ-QHR12B
76	ES-336780	SW TACT KHH10902
77	ET-349449	TR FET 2SK161 O,Y
78	ET-423224	TR FET 2SK19 BL
79	ET-336864	TR FET 2SK223 F
80	ET-337759	TR FET 2SK246 GR
81	ET-337743	TR FET 2SK107 E
82	ET-308472	TR 2SA1115 E,F,G
83	ET-345626	TR 2SA1248 S,T
84 N	ET-322244	TR 2SA608K-NP F,G
85	ET-305463	TR 2SA970 GR,BL
86	ET-307195	TR 2SC2240 GR,BL
87	ET-308141	TR 2SC2603 G
88	ET-338410	TR 2SC2878 A,B
89	ET-336869	TR 2SC2999 C,D
90	ET-336935	TR 2SC3000 D2,E,F
91	ET-353366	TR 2SC3112 A,B
92	ET-345625	TR 2SC3116 S,T
93	ET-349081	TR 2SC3383 S,T
94	ET-403413	TR 2SC536NP H
95	ET-328265	TR 2SC930 F
96	ET-344176	TR 2SD313HP F
97	ET-208012	TR 2SD571 K
98	EV-315540	R S-FIX H D8 3P 502
99	EV-344828	R S-FIX V RVF8 W01 3P 203
100	EV-352088	R S-FIX V RVF8W01 3P 103

"NOTE" N: New Parts

SYMBOL FOR DESTINATION

A : AAL (U.S.A)
B : UK (England)
C : CSA (Canada)
E : CEE (Europe)
S : SAA (Australia)
U : U/T (Universal Area)
V : VDE (West Germany)

1. TUNER PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1U	BA-A1008A030A	PC TUNER BLK AA-A35(U)
1-1C	BA-A1008A030B	PC TUNER BLK AA-A35(C,A)
1-1E	BA-A1008A030C	PC TUNER BLK AA-A35(E,S)
1-1V	BA-A1008A030D	PC TUNER BLK AA-A35(V)
1-1LE	BA-A1008A030E	PC TUNER BLK AA-A35L(E)
1-1LB	BA-A1008A030F	PC TUNER BLK AA-A35L(B)
	TUNER PC BOARD	
1-IC1	EI-202218	IC LA1245
1-IC2	EI-322248	IC LA1231N
1-IC3	EI-336717	IC TC9125BP
1-IC4	EI-315381	IC TD6102P
1-TR1	ET-338410	TR 2SC2878 A,B (LE,LB)
1-TR2to4	ET-403413	TR 2SC536NP H (LE,LB)
1-TR5	ET-423224	TR FET 2SK19 BL (LE,LB)
1-TR6	ET-336935	TR 2SC3000 D2,E,F
1-TR7	ET-322244	TR 2SA608K-NP F,G
1-TR8to10	ET-403413	TR 2SC536NP H
1-TR11,12	ET-353366	TR 2SC3112 A,B
1-TR13,14	ET-403413	TR 2SC536NP H
1-TR15	ET-322244	TR 2SA608K-NP F,G
1-TR16	ET-308141	TR 2SC2603 G
1-TR17	ET-349081	TR 2SC3383 S,T
1-TR18	ET-336864	TR FET 2SK223 F
1-TR19	ET-349081	TR 2SC3383 S,T
1-D1,2	ED-349460	D VARACTER SVC321 C,D
1-D3,4	ED-344280	D SILICON H GMA-01-FY2 F05 (LE,LB)
1-D5	ED-348205	D SILICON V MC931 DOUBLE
1-D6	ED-301911	D SILICON H DS448
1-D7,8	ED-344280	D SILICON H GMA-01-FY2 F05
1-D9	ED-301911	D SILICON H DS448
1-D10	ED-344280	D SILICON H GMA-01-FY2 F05
1-D11	ED-301911	D SILICON H DS448
1-SW1	ES-344445	SW TACT EVQ-QHR12B
1-SW2	ES-347122	SW SLIDE 00420569 2-04-2S(U)
1-T1	EO-337598	COIL VARI 2 25A-1353-01
1-T2	EO-337599	COIL VARI 2 25A-1354-03(LE,LB)
1-T3U	EO-348209	COIL OSC 2 7NR-8646Y 115.0UH (U,C,A,E,S,V)
1-T3L	EO-349456	COIL OSC 2 7NRS-9153Z 150.0UH (LE,LB)
1-T4	EO-352089	COIL OSC 2 7BRS-9098X 580.0UH (LE,LB)
1-T5	EO-353176	COIL IFT PEGK0008B-01 (455.0KHZ
1-T6	EO-202216	COIL IFT 7MC-6733C 460.0KHZ
1-T7	EO-349452	COIL DET 2 78-1045-01
1-T8	EO-349453	COIL DET 2 78-1046-01
1-FL1	EH-315407	FILTER CE SFE10.7MMKA 10.7MHZ
1-FL2U	EH-336804	FILTER CE SFE10.7MA8 10.7MHZ(U,C,A,E,S,LB)
1-FL2V	EH-338338	FILTER CE MS3GKY-A 10.700MHZ(V,LE)
1-FL3U	EH-343352	FILTER CE SFU459B9 0.459MHZ(EXCEPT C,A)
1-FL3C	EH-343353	FILTER CE SFU460B9 0.460MHZ(C,A)
1-FL4U	EH-337327	FILTER CE BFU459C4N 0.459MHZ(EXCEPT C,A)
1-FL4C	EH-337328	FILTER CE BFU460C4N 0.46MHZ(C,A)
1-FL5	EH-336830	FILTER LC LP BL-34HD(V)
1-X1	EI-327074	OSC X'TAL HC-18/U 9.000000MHZ
1-VC1	EC-330692	C S-FIX H TZ03R200E 4.2-20
1-VC2	EC-330692	C S-FIX H TZ03R200E 4.2-20 (LE,LB)
1-R5	ER-324185	⚠ R CB H S10 FS RDS 1/4W 221J
1-R6	ER-315046	⚠ R CB H F10 RDS 1/4W 121J
1-R34,35	ER-324337	⚠ R CB H S10 FS RDS 1/4W 560J
1-R36,37	ER-324480	⚠ R CB H S10 FS RDS 1/4W 470J
1-R52,53	ER-324337	⚠ R CB H S10 FS RDS 1/4W 560J
1-R86	ER-328067	⚠ R CB H S10 FS RDS 1/4W 331J (V)
1-R96	ER-315046	⚠ R CB H F10 RDS 1/4W 121J
1-R97	ER-324934	⚠ R CB H S10 FS RDS 1/4W 220J
1-C22	EC-351134	C PP V F05 PP 4300G 50DC
1-C23	EC-352097	C PP V F05 PP 2700G 50DC (LE,LB)
1-TM1	EJ-344423	TERMINAL W/SCREW YKD31-0133 P 2P
	MPX PC BOARD	
1-IC1B	EI-343349	IC LA3390
1-TR1Bto3B	ET-349081	TR 2SC3383 S,T
1-D1B	ED-346603	D ZENER H HZ6 A1
1-D2Bto5B	ED-301911	D SILICON H DS448
1-FL1B	EH-341654	FILTER LC LP 42W-1001
1-VR1B	EV-344828	R S-FIX V RVF8 W01 3P 203
1-VR2B	EV-352088	R S-FIX V RVF8W01 3P 103
1-R1B,2B	ER-324337	⚠ R CB H S10 FS RDS 1/4W 560J
1-C4BU	EC-344486	C PP V F05 PP 391J 50DC (EXCEPT C,A)
1-C4BC	EC-344478	C PP V F05 PP 561J 50DC(C,A)
1-C5BU	EC-344486	C PP V F05 PP 391J 50DC (EXCEPT C,A)
1-C5BC	EC-344478	C PP V F05 PP 561J 50DC(C,A)
1-C6B,7B	EC-344155	C PP V F05 PP 181J 50DC(U)
1-C12B,13B	EC-344484	C PP V F05 PP 392J 50DC
1-C15B	EC-344483	C PP V F05 PP 102J 50DC

2. FRONT END PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1U	BA-A3040A040A	PC FRONT END BLK AT-M77 (U,C,A,E,S,LE,LB)
2-1V	BA-A3040A040E	PC FRONT END BLK AA-A35(V)
	FRONT END PC BOARD	
2-TR1	ET-337743	TR FET 3SK107 E
2-TR2	ET-336869	TR 2SC2999 C,D
2-TR3	ET-328265	TR 2SC930 F
2-TR4	ET-349449	TR FET 2SK161 O,Y
2-D1to4	ED-336832	D VARACTOR SVC211SP
2-L1	EO-349461	COIL FIX 2 LINK
2-L2	EO-349462	COIL FIX 2 U147
2-L3	EO-349461	COIL FIX 2 LINK
2-L4,5	EO-349462	COIL FIX 2 U147
2-L6	EO-349446	COIL OSC 2 TFE2-OSC-U
2-L7	EO-336934	COIL FIX 1 LAL03KH 2R2M
2-T1	EO-337640	COIL IFT 119AC-15533X 10.7MHZ
2-VC1,2	EC-352419	C S-FIX H TZ03N100E 2.1-10
2-VC4	EC-352419	C S-FIX H TZ03N100E 2.1-10
2-C26	EC-349083	C STY V CUT CQ09S2B 101J 125DC

3. PRE AMP PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-1U	BA-A1007A070C	PC PRE AMP BLK AA-A35 (U,C,A,E,S,LE,LB)
3-1V	BA-A1007A070D	PC PRE AMP BLK AA-A35(V)

PRE AMP PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
3-IC1	EI-344764	IC M5218P-21
3-IC2	EI-349392	IC TC9164N
3-IC3	EI-349719	IC M5218P
3-IC4	EI-351966	IC TC9176P
3-IC5,6	EI-343373	IC TC9156P
3-D1,2	ED-346603	⚠ D ZENER H HZ6 A1
3-VL1	EO-337684	COIL FIX 2 FL12R751E 751K(V)
3-VL2	EO-345918	COIL FIX 1 LAL03KH 220K(V)
3-R12,13	ER-200944	⚠ R CB H S10 FS RDS 1/4W 152J
3-J1	EJ-336905	PIN J AJC-035-ACB P 4P

PIN JACK PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
3-VL1Bto4B	EO-345918	COIL FIX 1 LAL03KH 220K(V)
3-J1B,2B	EJ-336915	PIN J AJC-054-ABB P 4P

4. MAIN AMP PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1U	BA-A1008A040A	PC MAIN AMP BLK AA-A35(U)
4-1C	BA-A1008A040B	PC MAIN AMP BLK AA-A35(C,A)
4-1E	BA-A1008A040C	PC MAIN AMP BLK AA-A35 (E,S,LE)
4-1V	BA-A1008A040D	PC MAIN AMP BLK AA-A35(V)
4-1LB	BA-A1008A040E	PC MAIN AMP BLK AA-A35L(B)

MAIN AMP PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
4-IC1	EI-352036	IC STK-3042AK
4-IC2	EI-352041	IC STK-1050A
4-IC3	EI-337228	IC M5218L0
4-IC4	EI-345474	IC HA12002
4-TR1	ET-307195	TR 2SC2240 GR,BL
4-TR2	ET-305463	TR 2SA970 GR,BL
4-TR3	ET-344176	⚠ TR 2SD313HP F
4-TR4	ET-345625	⚠ TR 2SC3116 S,T
4-TR5	ET-345626	⚠ TR 2SA1248 S,T
4-TR6	ET-344176	⚠ TR 2SD313HP F
4-TR7	ET-208012	⚠ TR 2SD571 K
4-TR8,9	ET-337759	TR FET 2SK246 GR
4-D1,2	ED-301911	D SILICON H DS448
4-D3	ED-348990	D SILICON H DS446
4-D4	ED-301911	D SILICON H DS448
4-D5	ED-348990	D SILICON H DS446
4-D6	ED-309341	D GERMA H 1K34A
4-D7,8	ED-301911	D SILICON H DS448
4-D9	ED-346627	⚠ D ZENER H HZ33 2
4-D10	ED-346613	⚠ D ZENER H HZ11 C3
4-D11	ED-323836	⚠ D ZENER H HZ16 2
4-D12,13	ED-306320	⚠ D ZENER H HZ15 2
4-D14	ED-331197	⚠ D ZENER H HZ6 C1
4-D15	ED-348836	⚠ D SILICON RB602U 200/6.0A
4-D16,17	ED-345555	⚠ D SILICON DBB10C 200/1.0A
4-D19,20	ED-348990	D SILICON H DS446
4-SW1	ES-351964	SW PUSH SUL221A 2-THROW
4-SW2	ES-352043	SW PUSH FSB-62776 1-THROW
4-L1	EO-337880	COIL FIX 2 202AK-018 2R2K
4-RL1	EQ-337159	RELAY POW G4Z-2282P 2NO 24V
4-VL2	EO-336934	COIL FIX 1 LAL03KH 2R2M(V)
4-VR1	EV-315540	R S-FIX H D8 3P 502
4-FR1	ER-328278	⚠ R FUSE ERD2FC 1/4W 10R0G
4-FR2,3	ER-326169	⚠ R FUSE ERD2FC S10 1/4W 22R0G
4-FR4	ER-328278	⚠ R FUSE ERD2FC 1/4W 10R0G
4-R7	ER-349039	⚠ R OMF H SNP FS 2W 681J
4-R8,9	ER-308875	⚠ R CB H S15 FS RDS 1/2W 100J
4-R10	ER-327172	⚠ R OMF H SNP FS 1W 182J
4-R22	ER-333698	⚠ R CB H S15 FS RDS 1/2W 821J
4-R23,28	ER-323075	⚠ R CB H S10 FS RDS 1/4W 472J
4-R34	ER-658034	⚠ R OMF H FS 2W 221J
4-C7,8	EC-341872	C EC V F05 NP 04W 2R2M 50DC
4-C9	EC-343855	C EC V F05 NP SM R22M 50.0DC
4-C25,26	EC-320548	C CE V F 103Z 250AC

VERTICAL PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
4-TR1B	ET-305463	TR 2SA970 GR,BL
4-TR2B,3B	ET-307195	TR 2SC2240 GR,BL
4-D1B,2B	ED-301911	D SILICON H DS448
4-R7B	ER-337773	⚠ R OMF H S15 FS 1W 222J
4-R8B,10B	ER-325269	⚠ R CB H S10 FS RDS 1/4W 222J
4-R12B,13B	ER-325269	⚠ R CB H S10 FS RDS 1/4W 222J

PHONE PC BOARD

REF. NO.	PARTS NO.	DESCRIPTION
4-J1C	EJ-351963	PHONE J 3P YKB21-5060 6.3

POWER PC BOARD (U)

REF. NO.	PARTS NO.	DESCRIPTION
4-SW1D	ES-351965	⚠ SW PUSH ESB8215V(U)
4-C1D	EC-320548	⚠ C CE V F 103Z 250AC(U)

POWER PC BOARD (EXCEPT U)

REF. NO.	PARTS NO.	DESCRIPTION
4-SW1E	ES-351965	⚠ SW PUSH ESB8215V (C,A,E,S,V,LE,LB)
4-R1E	ER-672816	R CB H RD 1/2W 225J(C,A)
4-C1EC	EC-338411	⚠ C CE V FZ 103P 400AC(C,A)
4-C1EE	EC-338496	⚠ C CE V FZ 472P 400AC (E,S,V,LE,LB)

SPEAKER PC BOARD (V)

REF. NO.	PARTS NO.	DESCRIPTION
4-FL1F	EO-342936	COIL BALUN (V)
4-TM1F	EJ-349401	TERMINAL LEVER YKD21-0027 8P (V)

FILTER PC BOARD (V)

REF. NO.	PARTS NO.	DESCRIPTION
4-FL1G	EO-338409	COIL LF FKOB160MH02 250UH (V)

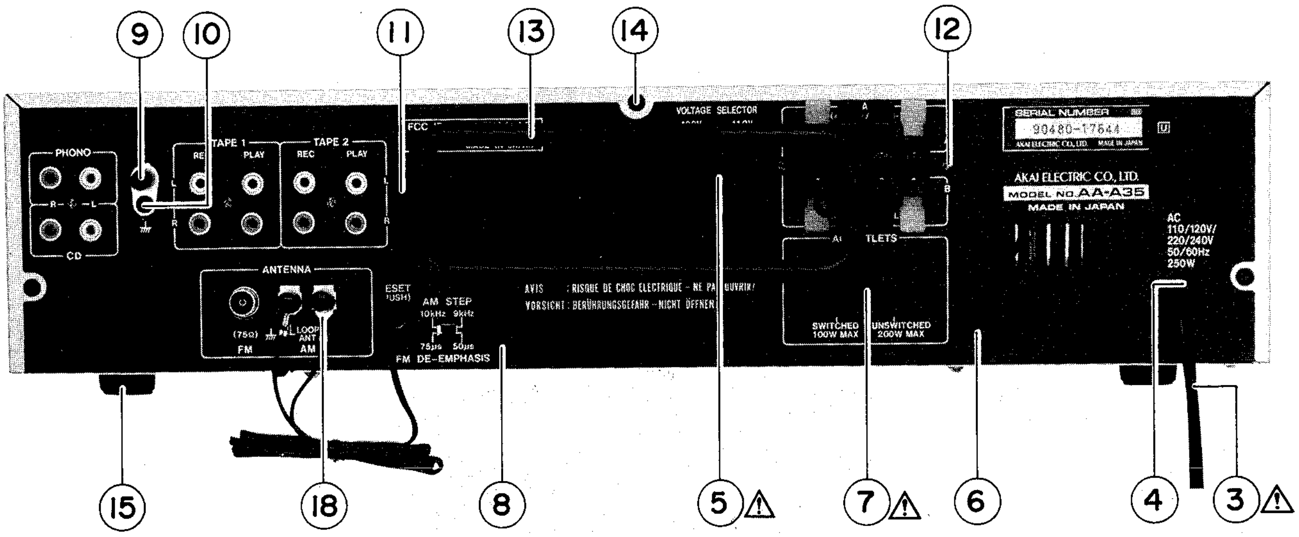
5. CONTROL PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
5-1U	BA-A1008A020A	PC CONTROL BLK AA-A35(U)
5-1C	BA-A1008A020B	PC CONTROL BLK AA-A35(C,A)
5-1E	BA-A1008A020C	PC CONTROL BLK AA-A35(E,S)
5-1V	BA-A1008A020G	PC CONTROL BLK AA-A35(V)
5-1L	BA-A1008A020D	PC CONTROL BLK AA-A35L(E,B)
	FLD PC BOARD	
5-IC1,2	EI-345765	IC LB1292
5-IC3,4	EI-315799	IC HA12019
5-TR1	ET-308141	TR 2SC2603 G
5-TR2	ET-308472	TR 2SA1115 E,F,G
5-D1to11	ED-301911	D SILICON H DS448
5-SW3to32	ES-336780	SW TACT KHH10902
5-IND1	EM-352044	IND FL BG-215Z DOUBLE
	CONTROL PC BOARD	
5-IC1B	EI-353059	IC A1007A2
5-IC2B	EI-351969	IC A1007T
5-IC3B	EI-345479	IC LC7910
5-IC4B,5B	EI-337013	IC LB1290
5-IC6B	EI-345765	IC LB1292
5-TR1B,2B	ET-403413	TR 2SC536NP H
5-TR3B	ET-403413	TR 2SC536NP H (U)
5-D1B	ED-301911	D SILICON H DS448
5-D2B	ED-331197	D ZENER H HZ6 C1
5-D3B	ED-306010	D ZENER H HZ6 A2
5-D4B	ED-301911	D SILICON H DS448 (LE,LB)
5-D5B	ED-301911	D SILICON H DS448 (U,E,S,V)
5-D7B	ED-301911	D SILICON H DS448 (C,A)
5-D8B	ED-301911	D SILICON H DS448 (U)
5-X1B,2B	EI-352673	OSC X'TAL HC-49/U 4.1MHZ
5-SR1B	EH-351973	COMP R RKC1/8B4 4.7K J
5-SR3B	EH-351971	COMP R RKC1/8B5 4.7K J
5-SR4B	EH-351976	COMP R RKC1/8B7 4.7K J
5-R10B	ER-349884	⚠ R OMF H SNP FS 1W 111J
5-C8B	EC-344157	C DOUBLE LAYER 473Z 5.5DC
	SPEAKER PC BOARD	
5-TM1C	EJ-349401	TERMINAL LEVER YKD21-0027 8P (EXCEPT V)

6. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1U	BT-352040	⚠ TRANS POWER AA-A35T-70(U)
6-1C	BT-352037	⚠ TRANS POWER AA-A35T-30(C,A)
6-1E	BT-352038	⚠ TRANS POWER AA-A35T-40(E) (E,LE)
6-1V	BT-352706	⚠ TRANS POWER AA-A35T-45(V)
6-1S	BT-352039	⚠ TRANS POWER AA-A35T-50(B,S) (S,LB)
6-2	ZS-345624	ST PAN40x08STL CMT CUP
6-3U	EW-374894	⚠ AC CORD 2 CORES VM-0129A, VFF U/T(U)
6-3C	EW-349724	⚠ AC CORD 2 CORES KP-8W, SPT-2 105C UC (C,A)
6-3E	EW-336923	⚠ AC CORD 2 CORES KP-419C, LTCE-2F EV (E,V,LE)
6-3S	EW-336924	⚠ AC CORD 2 CORES KP-560, LTSA-2F S (S)
6-3LB	EW-347025	⚠ AC CORD 2 CORES LTBS-2F B (LB)
6-4	EZ-631945	STRAIN RELIEF SR-4N-4
6-5	ES-349070	⚠ SW SELECT YKS11-0002 02-4 (U)
6-6U	SP-351925A	PANEL REAR AA-A35 (U)
6-6C	SP-351925B	PANEL REAR AA-A35 (C,A)
6-6E	SP-351925C	PANEL REAR AA-A35 (E,V)
6-6S	SP-351925D	PANEL REAR AA-A35(S)
6-6LE	SP-351925F	PANEL REAR AA-A35L(E)
6-6LB	SP-351925E	PANEL REAR AA-A35L(B)
6-7U	EJ-343362	⚠ SOCKET OUTLET S2T732T174 JUC 2x2P (U)
6-7C	EJ-349837	⚠ SOCKET OUTLET S2T732T124 JUC (C,A)
6-8	ZS-319460	T2BR30x06STL BZN PROJECTION
6-9	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
6-10	ZS-319460	T2BR30x06STL BZN PROJECTION
6-11	SZ-332739	HOLDER ANTENNA
6-12	ZS-351886	PT BR30x10STL BNI
6-13	EE-337976	ANT LOOP LA-200A
6-14	ZS-319460	T2BR30x06STL BZN PROJECTION
6-15	SA-332850	ROUND FOOT
6-16	ZW-698308	RV NYL30x055 BL
6-17	EI-352041	⚠ IC STK-1050A (IC2)
6-18	EJ-344423	TERMINAL W/SCREW YKD31-0133 P 2P (TM1)
6-19	EF-691007	⚠ FUSE SEMKO T 250V 3.13A (LB) (F1)
6-20C	EF-305703	⚠ FUSE TSC 125V 0.63A (C,A) (F3)
6-20E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,V,S,LE,LB) (F3)
6-21C	EF-305703	⚠ FUSE TSC 125V 0.63A (C,A) (F4)
6-21E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,V,S,LE,LB) (F4)
6-22C	EF-305703	⚠ FUSE TSC 125V 0.63A (C,A) (F5)
6-22E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,V,S,LE,LB) (F5)
6-23C	EF-305703	⚠ FUSE TSC 125V 0.63A (C,A) (F6)
6-23E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,V,S,LE,LB) (F6)
6-24C	EF-346115	⚠ FUSE TSC 125V 6.30A (C,A) (F7)
6-24E	EF-242605	⚠ FUSE SEMKO T 250V 6.30A (E,V,S,LE,LB) (F7)
6-25C	EF-346115	⚠ FUSE TSC 125V 6.30A (C,A) (F8)
6-25E	EF-242605	⚠ FUSE SEMKO T 250V 6.30A (E,V,S,LE,LB) (F8)
6-26x	ZW-305013	RV POP32 (C,A)

ASSEMBLY BLOCK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CD
TAPE 1
TAPE 2
REC
PLAY
ANTENNA
(75Ω)
FM
LOOP ANT
AM
AM STEP
10kHz 9kHz
75μs 50μs
FM DE-EMPHASIS
VOLTAGE SELECTOR
AVIS : RISQUE DE CHOC ELECTRIQUE - NE PA(S) OUVRIR
VORSICHT : BERÜHRUNGSGEFAHR - NICHT ÖFFNEN
SWITCHED 100W MAX
UNSWITCHED 200W MAX
SERIAL NUMBER
90480-17544
AKAI ELECTRIC CO., LTD.
MODEL NO. AA-A35
MADE IN JAPAN
AC 110/120V/ 220/240V 50/60Hz 250W
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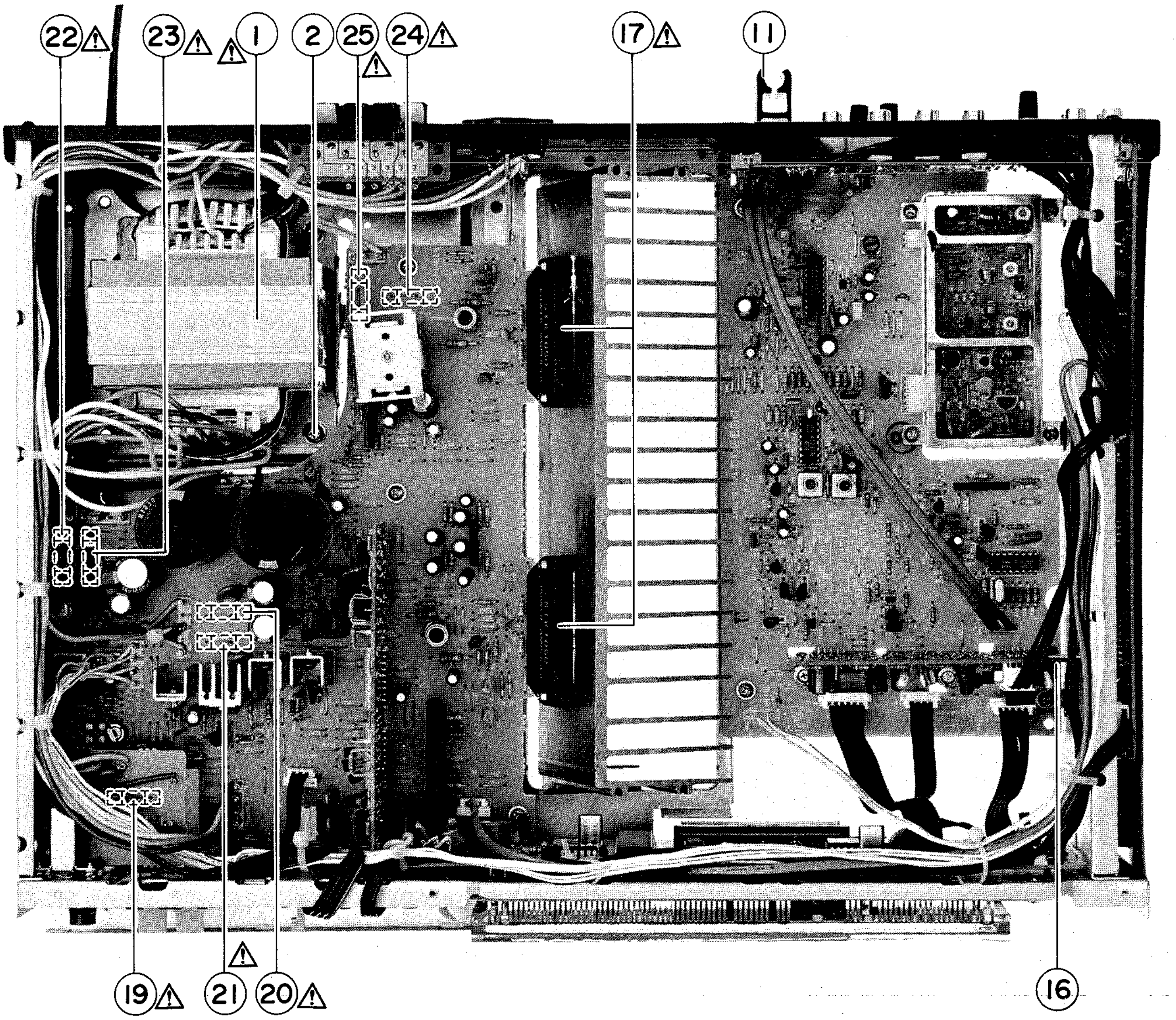
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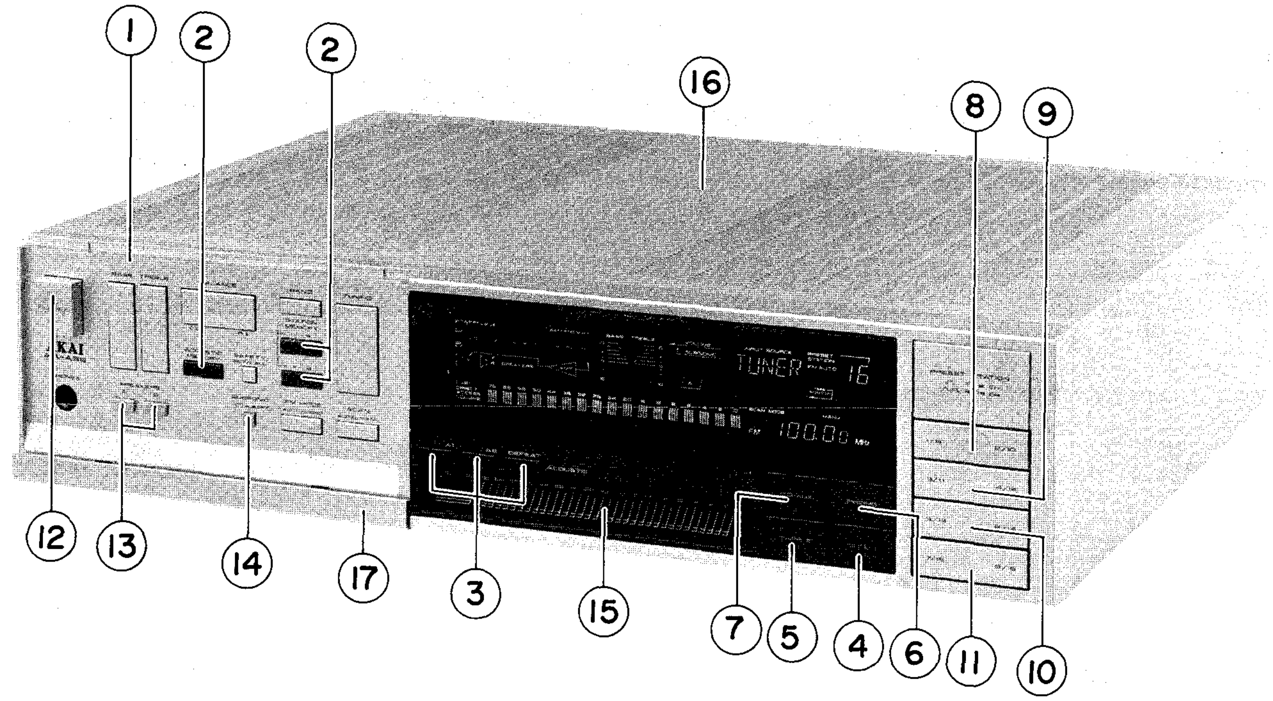
16

FINAL ASSEMBLY BLOCK



7. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	PANEL FRONT BLOCK	
7-1	BD-A1008A050A	PANEL FRONT BLK AA-A35
7-1L	BD-A1008A050C	PANEL FRONT BLK AA-A35L
7-1P	BD-A1008A050B	PANEL FRONT BLK AA-A35-P
7-1LP	BD-A1008A050D	PANEL FRONT BLK AA-A35L-P
7-1B	BD-A1008A050E	PANEL FRONT BLK AA-A35-B
7-1LB	BD-A1008A050F	PANEL FRONT BLK AA-A35L-B
7-2	SK-351913	KNOB PUSH(B) (W/P)
7-2B	SK-351913B	KNOB PUSH(B)-B
7-3	SK-351914	KNOB PUSH(C) (W/P)
7-3B	SK-351914B	KNOB PUSH(C)-B
7-4	SK-351915A	KNOB TAPE1 (W/P)
7-4B	SK-351915E	KNOB TAPE1-B
7-5	SK-351915B	KNOB TAPE2 (W/P)
7-5B	SK-351915F	KNOB TAPE2-B
7-6	SK-351915C	KNOB PHONO (W/P)
7-6B	SK-351915G	KNOB PHONO-B
7-7	SK-351915D	KNOB DAD(AUX) (W/P)
7-7B	SK-351915H	KNOB DAD(AUX)-B
7-8	SK-351918A	KNOB MEMORY(A)
7-8P	SK-351918E	KNOB MEMORY(A)-P
7-8B	SK-351918U	KNOB MEMORY(A)-B
7-9	SK-351918B	KNOB MEMORY(B)
7-9P	SK-351918F	KNOB MEMORY(B)-P
7-9B	SK-351918V	KNOB MEMORY(B)-B
7-10	SK-351918C	KNOB MEMORY(C)
7-10P	SK-351918G	KNOB MEMORY(C)-P
7-10B	SK-351918W	KNOB MEMORY(C)-B
7-11	SK-351918D	KNOB MEMORY(D)
7-11P	SK-351918H	KNOB MEMORY(D)-P
7-11B	SK-351918X	KNOB MEMORY(D)-B
7-12	SK-343017A	KNOB POWER
7-12P	SK-343017B	KNOB POWER-P
7-12B	SK-343017F	KNOB POWER-B
	FINAL ASSEMBLY BLOCK	
7-13	SK-342819C	KNOB PUSH(B)
7-13P	SK-342819B	KNOB PUSH-P
7-13B	SK-342819E	KNOB PUSH(B)-B
7-14	SK-344331D	KNOB PUSH (4)
7-14P	SK-344331E	KNOB PUSH (4)-P
7-14B	SK-344331A	KNOB PUSH (1)
7-15	EV-351497	VR SPL MEMBRANE VS-115-2 B105
7-16	SP-351935A	COVER UPPER
7-16P	SP-351935B	COVER UPPER-P
7-16B	SP-351935C	COVER UPPER-B
	PANEL DOOR BLOCK	
7-17	BD-A1008A060A	PANEL DOOR BLK AA-A35
7-17L	BD-A1008A060C	PANEL DOOR BLK AA-A35L
7-17P	BD-A1008A060B	PANEL DOOR BLK AA-A35-P
7-17LP	BD-A1008A060D	PANEL DOOR BLK AA-A35L-P
7-17B	BD-A1008A060E	PANEL DOOR BLK AA-A35-B
7-17LB	BD-A1008A060F	PANEL DOOR BLK AA-A35L-B
7-18x	ZG-345575A	SP PLATE (L)
7-19x	ZG-345575B	SP PLATE (R)
7-20x	MB-345576	CUSHION DOOR

SYMBOL FOR COLOR VARIATION

NON : STANDARD COLOR
P : PEARL SHADOW
B : BLACK

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PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-A1007A070C	3-1U	ED-301911	5-D4B	EI-343349	1-IC1B	ER-325269	4-R10B
BA-A1007A070D	3-1V	ED-301911	5-D2	EI-343373	3-IC6	ER-326169	4-FR3
BA-A1008A020A	5-1U	ED-301911	5-D8	EI-343373	3-IC5	ER-326169	4-FR2
BA-A1008A020B	5-1C	ED-301911	5-D5B	EI-344764	3-IC1	ER-327172	4-R10
BA-A1008A020C	5-1E	ED-301911	5-D8B	EI-345474	4-IC4	ER-328067	1-R86
BA-A1008A020D	5-1L	ED-301911	5-D7B	EI-345479	5-IC3B	ER-328278	4-FR4
BA-A1008A020G	5-1V	ED-301911	5-D1	EI-345765	5-IC6B	ER-328278	4-FR1
BA-A1008A030A	1-1U	ED-301911	5-D3	EI-345765	5-IC2	ER-333698	4-R22
BA-A1008A030B	1-1C	ED-301911	5-D11	EI-345765	5-IC1	ER-337773	4-R7B
BA-A1008A030C	1-1E	ED-301911	5-D10	EI-349392	3-IC2	ER-349039	4-R7
BA-A1008A030D	1-1V	ED-301911	5-D9	EI-349719	3-IC3	ER-349884	5-R10B
BA-A1008A030E	1-1LE	ED-301911	5-D5	EI-351966	3-IC4	ER-658034	4-R34
BA-A1008A030F	1-1LB	ED-301911	5-D4	EI-351969	5-IC2B	ER-672816	4-R1E
BA-A1008A040A	4-1U	ED-306010	5-D3B	EI-352036	4-IC1	ES-336780	5-SW21
BA-A1008A040B	4-1C	ED-306320	4-D13	EI-352041	4-IC2	ES-336780	5-SW28
BA-A1008A040C	4-1E	ED-306320	4-D12	EI-352041	6-17	ES-336780	5-SW13
BA-A1008A040D	4-1V	ED-309341	4-D6	EI-352673	5-X1B	ES-336780	5-SW17
BA-A1008A040E	4-1LB	ED-323836	4-D11	EI-352673	5-X2B	ES-336780	5-SW27
BA-A3040A040A	2-1U	ED-331197	4-D14	EI-353059	5-IC1B	ES-336780	5-SW11
BA-A3040A040E	2-1V	ED-331197	5-D2B	EJ-329610	6-9	ES-336780	5-SW15
BD-A1008A050A	7-1	ED-336832	2-D3	EJ-336905	3-J1	ES-336780	5-SW5
BD-A1008A050B	7-1P	ED-336832	2-D2	EJ-336915	3-J2B	ES-336780	5-SW25
BD-A1008A050C	7-1L	ED-336832	2-D4	EJ-336915	3-J1B	ES-336780	5-SW20
BD-A1008A050D	7-1LP	ED-336832	2-D1	EJ-343362	6-7U	ES-336780	5-SW18
BD-A1008A050E	7-1B	ED-344280	1-D3	EJ-344423	1-TM1	ES-336780	5-SW29
BD-A1008A050F	7-1LB	ED-344280	1-D7	EJ-344423	6-18	ES-336780	5-SW31
BD-A1008A060A	7-17	ED-344280	1-D4	EJ-349401	4-TM1F	ES-336780	5-SW26
BD-A1008A060B	7-17P	ED-344280	1-D8	EJ-349401	5-TM1C	ES-336780	5-SW24
BD-A1008A060C	7-17L	ED-344280	1-D10	EJ-349837	6-7C	ES-336780	5-SW8
BD-A1008A060D	7-17LP	ED-345555	4-D16	EJ-351963	4-J1C	ES-336780	5-SW12
BD-A1008A060E	7-17B	ED-345555	4-D17	EM-352044	5-IND1	ES-336780	5-SW4
BD-A1008A060F	7-17LB	ED-346603	1-D1B	EO-202216	1-T6	ES-336780	5-SW22
BT-352037	6-1C	ED-346603	3-D1	EO-336934	2-L7	ES-336780	5-SW23
BT-352038	6-1E	ED-346603	3-D2	EO-336934	4-VL2	ES-336780	5-SW7
BT-352039	6-1S	ED-346613	4-D10	EO-337598	1-T1	ES-336780	5-SW6
BT-352040	6-1U	ED-346627	4-D9	EO-337599	1-T2	ES-336780	5-SW14
BT-352706	6-1V	ED-348205	1-D5	EO-337640	2-T1	ES-336780	5-SW30
EC-320548	4-C26	ED-348836	4-D15	EO-337684	3-VL1	ES-336780	5-SW9
EC-320548	4-C1D	ED-348990	4-D5	~~EO-3~~37880	4-L1	ES-336780	5-SW32
EC-320548	4-C25	ED-348990	4-D3	EO-338409	4-FL1G	ES-336780	5-SW16
EC-330692	1-VC1	ED-348990	4-D19	EO-342936	4-FL1F	ES-336780	5-SW3
EC-330692	1-VC2	ED-348990	4-D20	EO-345918	3-VL2B	ES-336780	5-SW19
EC-338411	4-C1EC	ED-349460	1-D1	EO-345918	3-VL4B	ES-336780	5-SW10
EC-338496	4-C1EE	ED-349460	1-D2	EO-345918	3-VL1B	ES-344445	1-SW1
EC-341872	4-C8	EE-337976	6-13	EO-345918	3-VL2	ES-347122	1-SW2
EC-341872	4-C7	EF-242605	6-24E	EO-345908	3-VL3B	ES-349070	6-5
EC-343855	4-C9	EF-242605	6-25E	EO-348209	1-T3U	ES-351964	4-SW1
EC-344155	1-C6B	EF-305703	6-23C	EO-349446	2-L6	ES-351965	4-SW1E
EC-344155	1-C7B	EF-305703	6-21C	EO-349452	1-T7	ES-351965	4-SW1D
EC-344157	5-C8B	EF-305703	6-20C	EO-349435	1-T8	ES-352043	4-SW2
EC-344478	1-C4BC	EF-305703	6-22C	EO-349456	1-T3L	ET-208012	4-TR7
EC-344478	1-C5BC	EF-346115	6-25C	EO-349461	2-L1	ET-305463	4-TR2
EC-344483	1-C15B	EF-346115	6-24C	EO-349461	2-L3	ET-305463	4-TR1B
EC-344484	1-C13B	EF-593706	6-22E	EO-349462	2-L4	ET-307195	4-TR2B
EC-344484	1-C12B	EF-593706	6-21E	EO-349462	2-L5	ET-307195	4-TR1
EC-344486	1-C5BU	EF-593706	6-23E	EO-349462	2-L2	ET-307195	4-TR3B
EC-344486	1-C4BU	EF-593706	6-20E	EO-352089	1-T4	ET-308141	1-TR16
EC-349083	2-C26	EF-691007	6-19	EO-353176	1-T5	ET-308141	5-TR1
EC-351134	1-C22	EH-315407	1-FL1	EQ-337159	4-RL1	ET-308472	5-TR2
EC-352097	1-C23	EH-336804	1-FL2U	ER-200944	3-R13	ET-322244	1-TR7
EC-352419	2-VC1	EH-336830	1-FL5	ER-200944	3-R12	ET-322244	1-TR15
EC-352419	2-VC2	EH-337327	1-FL4U	ER-308875	4-R9	ET-328265	2-TR3
EC-352419	2-VC4	EH-337328	1-FL4C	ER-308875	4-R8	ET-336864	1-TR18
ED-301911	1-D2B	EH-338338	1-FL2V	ER-315046	1-R6	ET-336869	2-TR2
ED-301911	1-D11	EH-341654	1-FL1B	ER-315046	1-R96	ET-336935	1-TR6
ED-301911	1-D6	EH-343352	1-FL3U	ER-323075	4-R28	ET-337743	2-TR1
ED-301911	1-D9	EH-343353	1-FL3C	ER-323075	4-R23	ET-337759	4-TR9
ED-301911	1-D5B	EH-351971	5-SR3B	ER-324185	1-R5	ET-337759	4-TR8
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ED-301911	5-D1B	EI-337013	5-IC4B	ER-325269	4-R12B	ET-349081	1-TR1B
ED-301911	5-D7	EI-337013	5-IC5B	ER-325269	4-R13B	ET-349449	2-TR4
ED-301911	5-D6	EI-337228	4-IC3	ER-325269	4-R8B	ET-353366	1-TR12

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PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. No.	PARTS NO.	REF. NO.
ET-353366	1-TR11						
ET-403413	1-TR8						
ET-403413	1-TR14						
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ET-403413	1-TR2						
ET-403413	1-TR4						
ET-403413	5-TR3B						
ET-403413	5-TR2B						
ET-403413	5-TR1B						
ET-423224	1-TR5						
EV-315540	4-VR1						
EV-344828	1-VR1B						
EV-351497	7-15						
EV-352088	1-VR2B						
EW-336923	6-3E						
EW-336924	6-3S						
EW-347025	6-3LB						
EW-349724	6-3C						
EW-374894	6-3U						
EZ-631945	6-4						
MB-345576	7-20x						
SA-332850	6-15						
SK-342819B	7-13P						
SK-342819C	7-13						
SK-342819E	7-13B						
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SP-351925D	6-6S						
SP-351925E	6-6LB						
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SP-351935A	7-16						
SP-351935B	7-16P						
SP-351935C	7-16B						
SZ-332739	6-11						
ZG-345575A	7-18x						
ZG-345575B	7-19x						
ZS-319460	6-10						
ZS-319460	6-14						
ZS-319460	6-8						
ZS-345624	6-2						
ZS-351886	6-12						
ZW-305013	6-26x						
ZW-698308	6-16						

AKAI

MODEL AA-A35/L

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12. PRE AMP SCHEMATIC DIAGRAM AA-A35/L 16
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15. FRONT END SCHEMATIC DIAGRAM AA-A35/L 18
16. MPX PC BOARD AA-A35/L 19
17. FRONT END PC BOARD AA-A35/L 19

A1007A

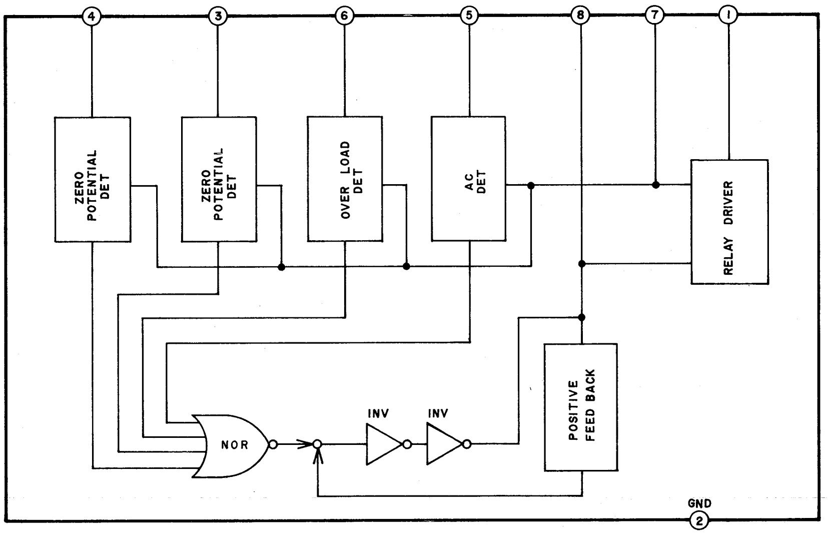
Pin No.	Functions	
1	DIGIT 0	STROBE FOR KEY MATRIX CONVERTER FL DISPLAY
2	DIGIT 1	
3	DIGIT 2	
4	DIGIT 3	
5	DIGIT 4	
6	DIGIT 5	
7	SEG 12	FL DISPLAY SEGMENT DRIVE
8	SEG 13	
9	SEG 11	
10	SEG 10	
11	SEG 9	
12	SEG 8	
13	INPUT SELECTOR DATA FOR ANALOGUE SW	
14	INPUT SELECTOR CLOCK FOR ANALOGUE SW	
15	INPUT SELECTOR STROBE FOR ANALOGUE SW	
16	STROBE FOR ELECTRONIC VOLUME (MAIN, BASS, TREBLE VOLUME)	
17	SEG 7	FL DISPLAY SEGMENT DRIVE
18	SEG 6	
19	SEG 5	
20	SEG 4	
21	GND	
22	SEG 3	FL DISPLAY SEGMENT DRIVE
23	SEG 2	
24	SEG 1	
25	SEG 0	
26		KEY MATRIX INPUT
27		
28		

Pin No.	Functions
29	CARTRIDGE (MM/MC) SELECTION INPUT MC → "H" MM → "L"
30	TEST
31	X_{IN}
32	X_{OUT}
33	RESET INPUT
34	HOLD INPUT (BACK UP)
35	INPUT STATUS OUTPUT, TUNER → "L" PHONO/CD → "H"
36	TUNER OPERATION PULSE INPUT, Switching input selector to TUNER whenever receives the pulse (6 m sec) from Tuner MI-COM (IC A1007T)
37	MM/MC CIRCUIT SWITCHING OUTPUT.
38	DATA DETECTION FROM A/D CONVERTER
39	END DETECTION FROM A/D CONVERTER
40	ST–WR (CONVERSION START) OUTPUT FOR A/D CONVERTER (LC-7910) DATA OUTPUT FOR MAIN, BASS, TREBLE CONTROL VOLUME IC (TC9176P, TC9156P x 2)
41	CE (DATA CLOCK) OUTPUT FOR A/D CONVERTER (LC7910) CLOCK OUTPUT FOR MAIN, BASS TREBLE, CONTROL VOLUME IC (IC9176P, TC9150P x 2)
42	VDD +5V

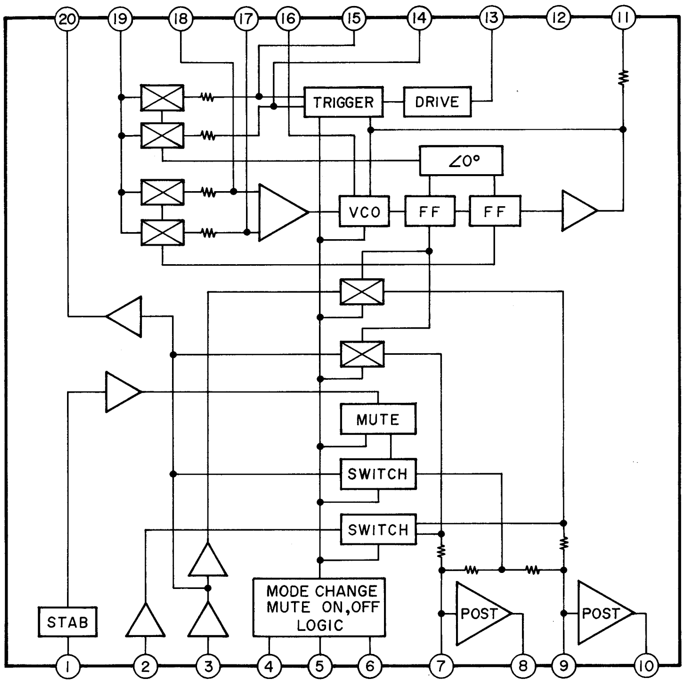
A1007T

Pin No.	Functions	
1	NOT USED	
2	TUNER OPERATION PULSE OUTPUT, Output 6 msec pulse to switch the input selector of Amp MI-COM (A1007A) to Tuner when operating Tuner section by depressing BAND, TUNER UP/DOWN or PRESET CH buttons.	
3	DIGIT 0	STROBE FOR KEY MATRIX CONVERTER & FL DISPLAY
4	DIGIT 1	
5	DIGIT 2	
6	DIGIT 3	
7	DIGIT 4	
8	DIGIT 5	
9	SEG a	FL DISPLAY SEGMENT DRIVE
10	SEG b	
11	SEG c	
12	SEG d	
13	FM MODE SELECTOR OUTPUT FORCED MONO → "H"	
14	TUNER OUT (L & R) MUTE OUTPUT, MUTE at "L"	
15	DETECTOR INPUT FOR THE STATUS OF AMP SECTION MI-COM (A1007A) INPUT SELECTOR. PHONO/CD → "H", TUNER → "L"	
16	Becomes level "H" 1 second after power is turned on ("H" after Reset/Back up cancellation) For the models AA-A35/A45, this terminal is used for the synchronization between static display (Bar meter) and Dynamic display when power is turned on.	
17	SEG e	FL DISPLAY SEGMENT DRIVE
18	SEG f	
19	SEG g	
20	SEG n	
21	GND	
22	A	DATA FOR THE PLL IC (9125BP)
23	B	
24	C	
25	D	
26		KEY MATRIX INPUT and AREA JUDGEMENT INPUT
27		
28		
29		
30	GND	
31	X_{IN}	
32	X_{OUT}	
33	RESET INPUT	
34	HOLD INPUT (BACK UP)	
35	DETECTOR INPUT FOR THE PRESET CH NUMBER, 20CH → "L", 16CH → "H"	
36	FM Band Designation Output	
37	MW Band Designation Output	
38	LW Band Designation Output	
39	LOAD OUTPUT TERMINAL to PLL IC (T9125BP)	
40	DETECTOR INPUT FOR THE AUTO STOP AT SCAN MODE	
41	Not used and Connect to +B LINE	
42	VDD (+5V)	

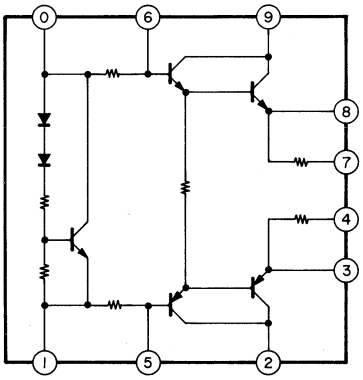
HA12002



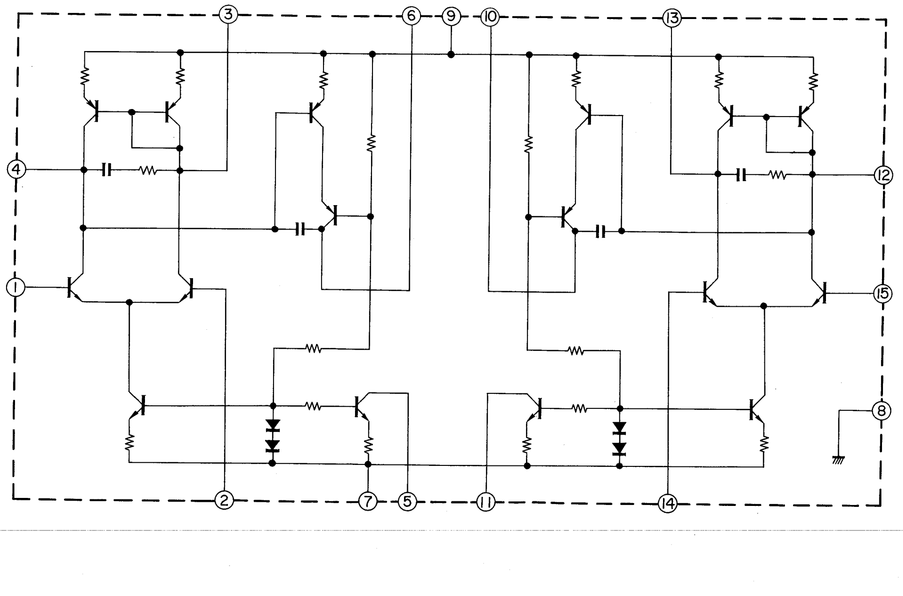
LA3390


20
19
18
17
16
15
14
13
12
11
TRIGGER
DRIVE
∠0°
VCO
FF
FF
MUTE
SWITCH
SWITCH
MODE CHANGE
MUTE ON,OFF
LOGIC
STAB
POST
POST
1
2
3
4
5
6
7
8
9
10

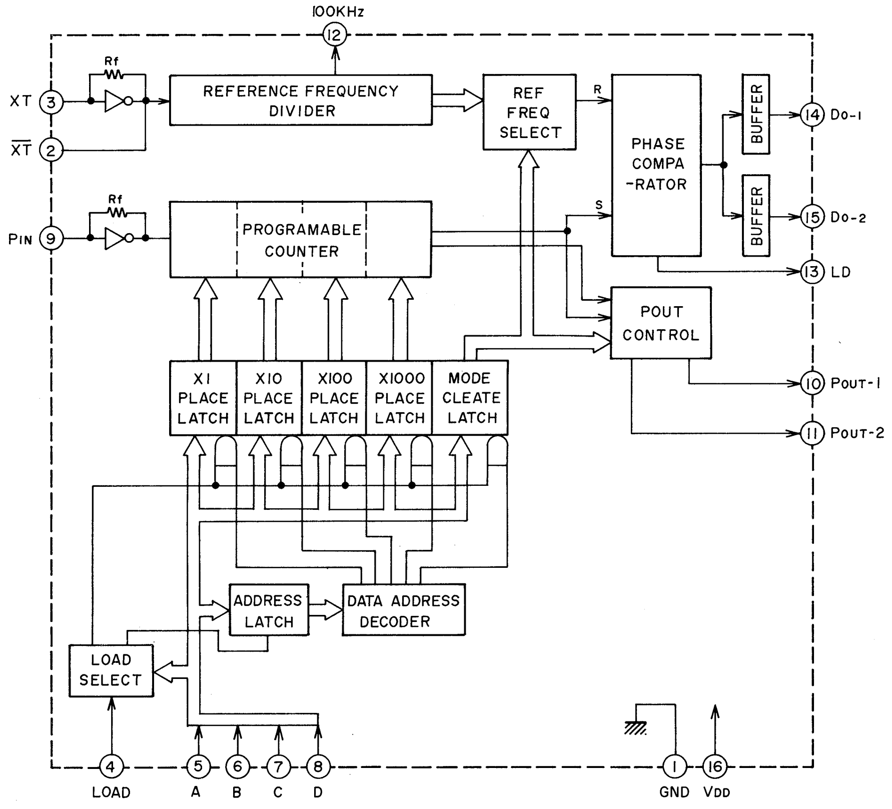
STK1050


0
6
9
8
7
4
3
1
5
2

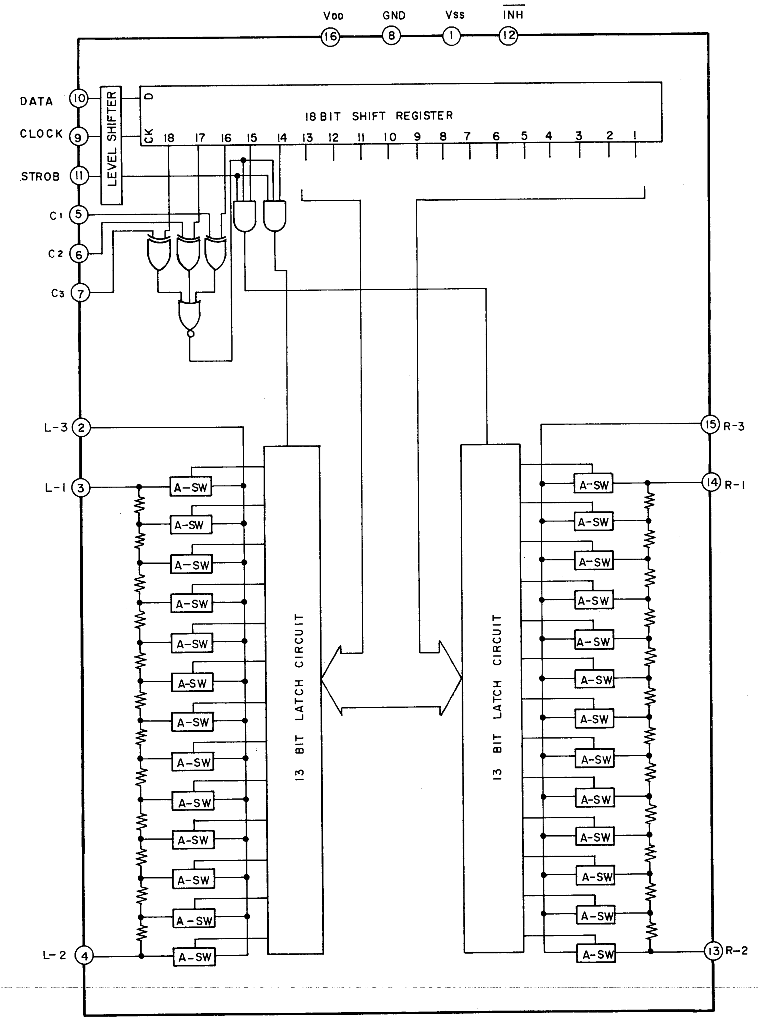
STK3042


3
6
9
10
13
4
12
1
15
8
2
7
5
11
14

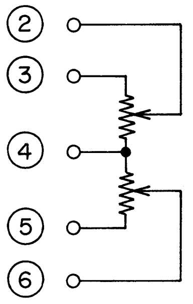
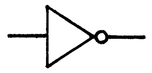
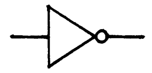
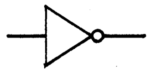
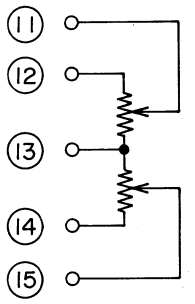
TC9125BP

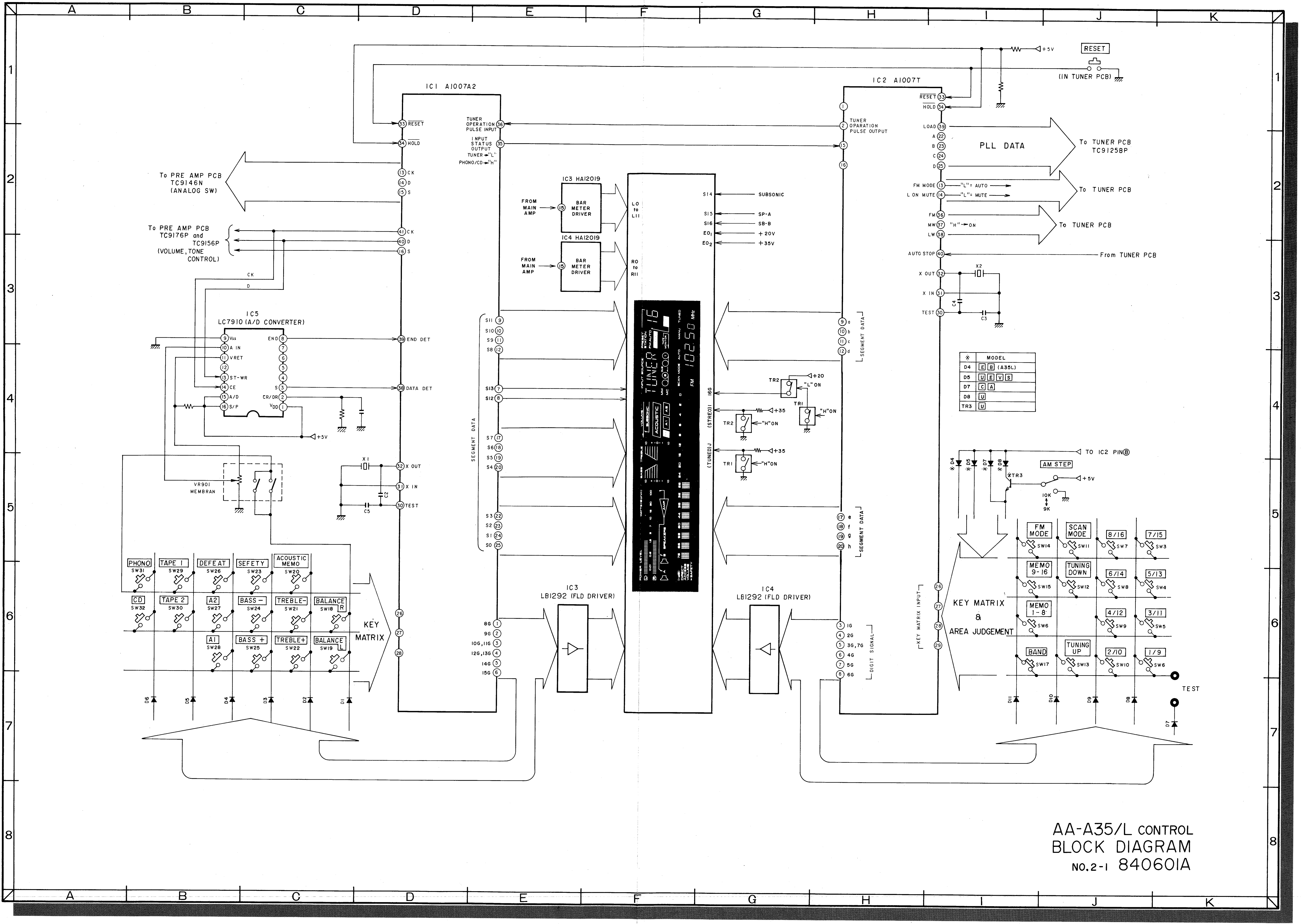

100KHz
12
Rf
XT 3
$\overline{XT}$ 2
REFERENCE FREQUENCY DIVIDER
REF FREQ SELECT
R
S
PHASE COMPA-RATOR
BUFFER
BUFFER
14 Do-1
15 Do-2
13 LD
PIN 9
Rf
PROGRAMABLE COUNTER
POUT CONTROL
X1 PLACE LATCH
X10 PLACE LATCH
X100 PLACE LATCH
X1000 PLACE LATCH
MODE CLEATE LATCH
10 POUT-1
11 POUT-2
ADDRESS LATCH
DATA ADDRESS DECODER
LOAD SELECT
4 LOAD
5 A
6 B
7 C
8 D
1 GND
16 VDD

TC9156P


VDD 16
GND 8
VSS 1
$\overline{INH}$ 12
DATA 10
CLOCK 9
STROB 11
C1 5
C2 6
C3 7
LEVEL SHIFTER
D
CK
18 BIT SHIFT REGISTER
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
L-3 2
L-1 3
L-2 4
15 R-3
14 R-1
13 R-2
A-SW
13 BIT LATCH CIRCUIT
13 BIT LATCH CIRCUIT

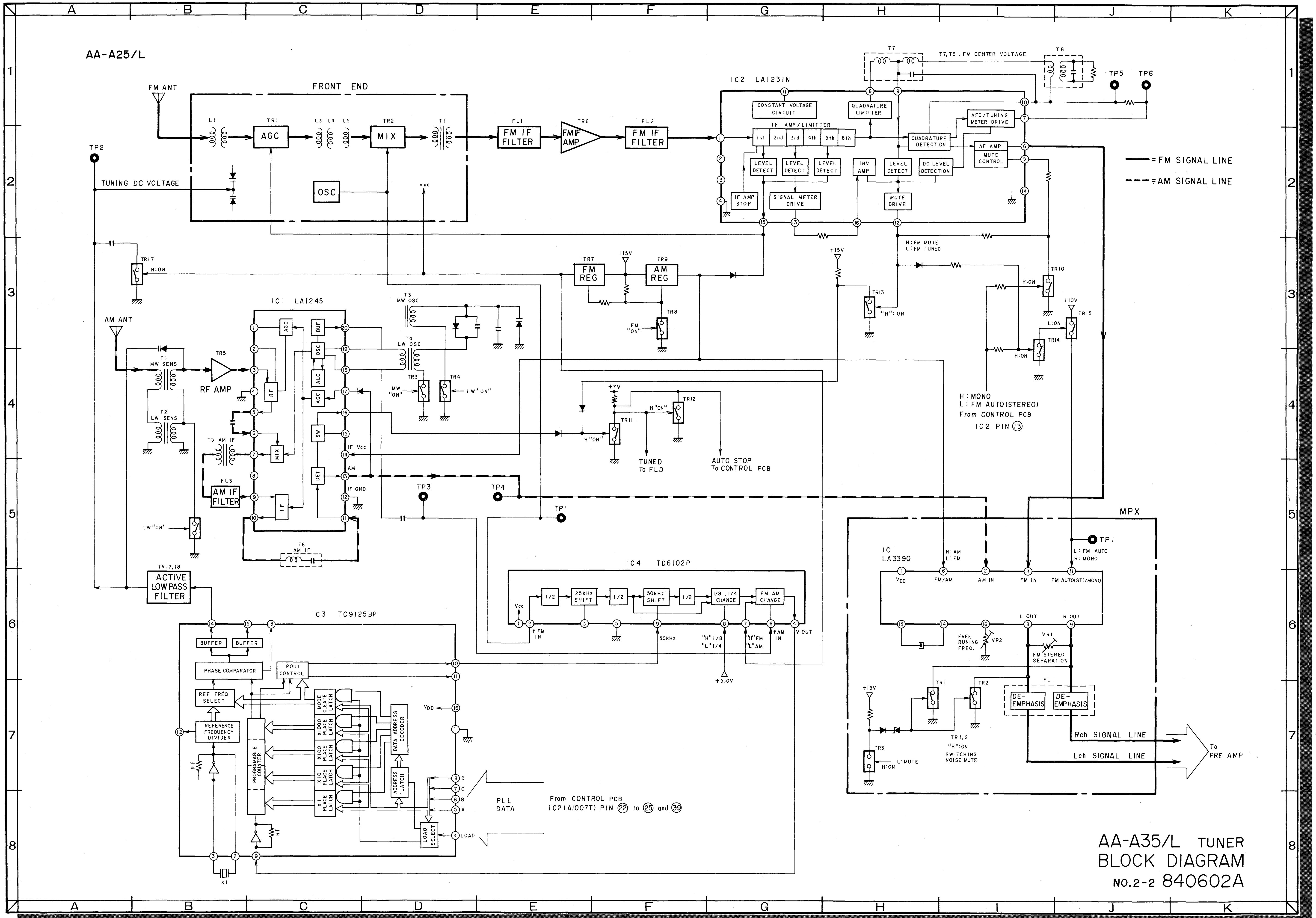
TC9176

Pin No.	Symbol	Functions	Remarks
1	V_{SS}	−15V	
2	L-OUT$_1$	10dB STEPS ATTENUATOR OUTPUT (Lch) Audio signal attenuate 0 to 70dB (10dB steps)	
3	L-IN$_1$	10 dB STEPS ATTENUATOR INPUT (Lch)	
4	A-GND	AC GND (Lch)	
5	L-IN$_2$	2dB STEPS ATTENUATOR INPUT (Lch)	
6	L-OUT$_2$	2dB STEPS ATTENUATOR OUTPUT (Lch) Audio signal attenuate 0 to 8db (2dB steps)	
7	GND	GND	
8	CK	CLOCK INPUT, This terminal is the CLOCK INPUT to read data of the DATA terminal.	
9	DATA	DATA INPUT FOR THE ATTENUATION LEVEL AND CHANNEL (Lch and Rch) SELECTION DATA, Data is composed to 20 bits and input by clock signal.	
10	ST	STROBE INPUT Attentuation Levels and channel (Lch and Rch) selection are read DATA, CK terminal that is latch to activate "H" at this terminal. Holding the previous data, when "H" level doesn't apply to this terminal.	
11	R-OUT$_2$	2dB STEPS ATTENUATOR OUTPUT (Rch) Audio signal attenuate 0 to 8dB (2dB steps)	 11 12 13 14 15
12	R-IN$_2$	2dB STEPS ATTENUATOR INPUT (Rch)	
13	A-GND	AC GND (Rch)	
14	R-IN$_1$	10dB STEPS ATTENUATOR INPUT (Rch)	
15	R-OUT$_1$	10dB STEPS ATTENUATOR OUTPUT (Rch) Audio signal attenuate 0 to 70dB (10dB steps)	
16	V_{DD}	+15V	

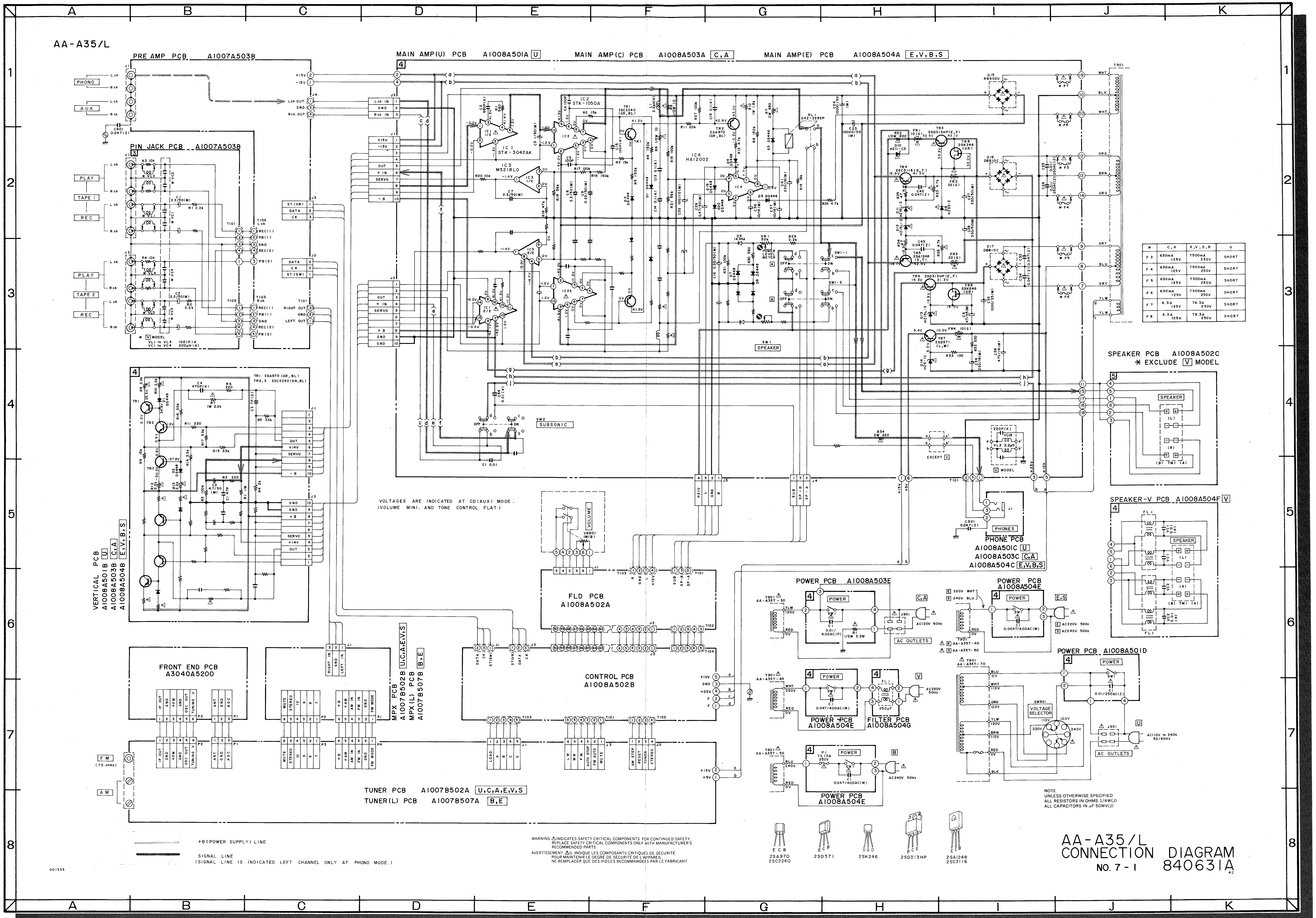

A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
IC1 A1007A2
IC2 A1007T
RESET
(IN TUNER PCB)
+5V
RESET
HOLD
TUNER OPERATION PULSE INPUT
INPUT STATUS OUTPUT
TUNER→"L"
PHONO/CD→"H"
TUNER OPARATION PULSE OUTPUT
LOAD
PLL DATA
To TUNER PCB TC9125BP
FM MODE
"L"= AUTO
L ON MUTE
"L"= MUTE
To TUNER PCB
FM
MW
LW
"H"→ON
To TUNER PCB
AUTO STOP
From TUNER PCB
X OUT
X IN
TEST
X2
C4
C3
To PRE AMP PCB TC9146N (ANALOG SW)
CK
D
S
To PRE AMP PCB TC9176P and TC9156P (VOLUME, TONE CONTROL)
IC3 HA12019
IC4 HA12019
FROM MAIN AMP
BAR METER DRIVER
LO to L11
RO to R11
S14
SUBSONIC
S15
SP-A
S16
SB-B
EO1
+20V
EO2
+35V
IC5
LC7910 (A/D CONVERTER)
Vss
A IN
VRET
ST-WR
CE
A/D
S/P
END
CR/DR
VDD
END DET
DATA DET
+5V
X1
C2
C5
VR901 MEMBRAN
SEGMENT DATA
TR2
TR1
"L"ON
"H"ON
+35
(STREO)1 16G
(TUNED)J
DIGIT SIGNAL
TO IC2 PIN⑧
AM STEP
※TR3
10K
9K
※D4
※D5
※D7
※D8
PHONO SW31
TAPE 1 SW29
DEFEAT SW26
SEFETY SW23
ACOUSTIC MEMO SW20
CD SW32
TAPE 2 SW30
A2 SW27
BASS− SW24
TREBLE− SW21
BALANCE R SW18
A1 SW28
BASS + SW25
TREBLE+ SW22
BALANCE L SW19
KEY MATRIX
D6
D5
D4
D3
D2
D1
IC3 LB1292 (FLD DRIVER)
IC4 LB1292 (FLD DRIVER)
8G
9G
10G,11G
12G,13G
14G
15G
1G
2G
3G,7G
4G
5G
6G
KEY MATRIX INPUT
KEY MATRIX & AREA JUDGEMENT
FM MODE SW14
SCAN MODE SW11
8/16 SW7
7/15 SW3
MEMO 9-16 SW15
TUNING DOWN SW12
6/14 SW8
5/13 SW4
MEMO 1-8 SW6
4/12 SW9
3/11 SW5
BAND SW17
TUNING UP SW13
2/10 SW10
1/9 SW6
TEST
D11
D10
D9
D8
D7

※	MODEL
D4	E B (A35L)
D5	U E V S
D7	C A
D8	U
TR3	U

AA-A35/L CONTROL
BLOCK DIAGRAM
NO.2-1 840601A


AA-A25/L
FM ANT
FRONT END
L1
TR1
AGC
L3 L4 L5
TR2
MIX
T1
OSC
Vcc
TP2
TUNING DC VOLTAGE
FL1
FM IF FILTER
TR6
FM IF AMP
FL2
FM IF FILTER
IC2 LA1231N
CONSTANT VOLTAGE CIRCUIT
QUADRATURE LIMITTER
IF AMP/LIMITTER
1st 2nd 3rd 4th 5th 6th
QUADRATURE DETECTION
AFC/TUNING METER DRIVE
AF AMP
MUTE CONTROL
LEVEL DETECT
INV AMP
DC LEVEL DETECTION
IF AMP STOP
SIGNAL METER DRIVE
MUTE DRIVE
T7
T7,T8 : FM CENTER VOLTAGE
T8
TP5
TP6
= FM SIGNAL LINE
= AM SIGNAL LINE
TR17
H:ON
TR7
FM REG
+15V
TR9
AM REG
TR8
FM "ON"
H:FM MUTE
L:FM TUNED
TR13
"H":ON
TR10
H:ON
+10V
TR15
L:ON
TR14
H:ON
H : MONO
L : FM AUTO(STEREO)
From CONTROL PCB
IC2 PIN ⑬
AM ANT
T1 MW SENS
TR5
RF AMP
T2 LW SENS
T5 AM IF
FL3
AM IF FILTER
LW "ON"
IC1 LA1245
AGC
BUF
OSC
ALC
RF
SW
MIX
DET
IF
IF Vcc
AM
IF GND
T6 AM IF
T3 MW OSC
T4 LW OSC
TR3
MW "ON"
TR4
LW "ON"
+7V
TR11
H "ON"
TR12
H "ON"
TUNED To FLD
AUTO STOP To CONTROL PCB
TP3
TP4
TP1
TR17,18
ACTIVE LOWPASS FILTER
IC3 TC9125BP
BUFFER
PHASE COMPARATOR
POUT CONTROL
REF FREQ SELECT
REFERENCE FREQUENCY DIVIDER
PROGRAMMABLE COUNTER
MODE CLEATE LATCH
X1000 PLACE LATCH
X100 PLACE LATCH
X10 PLACE LATCH
X1 PLACE LATCH
DATA ADDRESS DECODER
ADDRESS LATCH
LOAD SELECT
Rf
X1
VDD
D
C
B
A
LOAD
PLL DATA
From CONTROL PCB
IC2 (A1007T) PIN ㉒ to ㉕ and ㊴
IC4 TD6102P
1/2
25kHz SHIFT
50kHz SHIFT
1/8 , 1/4 CHANGE
FM, AM CHANGE
Vcc
↑FM IN
50kHz
"H" 1/8
"L" 1/4
"H" FM
"L" AM
↑AM IN
V OUT
+5.0V
MPX
TP1
IC1 LA3390
H:AM L:FM
L: FM AUTO H: MONO
VDD
FM/AM
AM IN
FM IN
FM AUTO(ST)/MONO
L OUT
R OUT
FREE RUNING FREQ.
VR2
VR1
FM STEREO SEPARATION
FL1
DE-EMPHASIS
DE-EMPHASIS
+15V
TR1
TR2
TR1,2
"H":ON
SWITCHING NOISE MUTE
TR3
H:ON
L:MUTE
Rch SIGNAL LINE
Lch SIGNAL LINE
To PRE AMP
A B C D E F G H I J K
1 2 3 4 5 6 7 8

AA-A35/L TUNER
BLOCK DIAGRAM
NO.2-2 840602A


AA-A35/L
PRE AMP PCB A1007A503B
PIN JACK PCB A1007A503B
MAIN AMP(U) PCB A1008A501A U
MAIN AMP(C) PCB A1008A503A C,A
MAIN AMP(E) PCB A1008A504A E,V,B,S
PHONO
AUX
PLAY
TAPE 1
REC
TAPE 2
IC1 STK-3042AK
IC2 STK-1050A
IC3 M5218L0
IC4 HA12002
SW1 SPEAKER
SW2 SUBSONIC
VERTICAL PCB A1008A501B U A1008A503B C,A A1008A504B E,V,B,S
SPEAKER PCB A1008A502C
* EXCLUDE V MODEL
SPEAKER-V PCB A1008A504F V
PHONE PCB A1008A501C U A1008A503C C,A A1008A504C E,V,B,S
PHONES
FLD PCB A1008A502A
VOLUME
CONTROL PCB A1008A502B
FRONT END PCB A3040A5200
MPX PCB A1007B502B U,C,A,E,V,S
MPX(L) PCB A1007B507B B,E
TUNER PCB A1007B502A U,C,A,E,V,S
TUNER(L) PCB A1007B507A B,E
FM (75 ohms)
AM
POWER PCB A1008A503E
POWER PCB A1008A504E
FILTER PCB A1008A504G
POWER PCB A1008A501D
AC OUTLETS
VOLTAGE SELECTOR
AC110V to 240V 50/60Hz
2SA970 2SC2240
2SD571
2SK246
2SD313HP
2SA1248 2SC3116
001535

VOLTAGES ARE INDICATED AT CD(AUX) MODE.
(VOLUME MINI. AND TONE CONTROL FLAT)

+B (POWER SUPPLY) LINE

SIGNAL LINE
(SIGNAL LINE IS INDICATED LEFT CHANNEL ONLY AT PHONO MODE.)

*	C , A	E , V , S , B	U
F 3	630mA 125V	T500mA 250V	SHORT
F 4	630mA 125V	T500mA 250V	SHORT
F 5	630mA 125V	T500mA 250V	SHORT
F 6	630mA 125V	T500mA 250V	SHORT
F 7	6.3A 125V	T6.3A 250V	SHORT
F 8	6.3A 125V	T6.3A 250V	SHORT

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

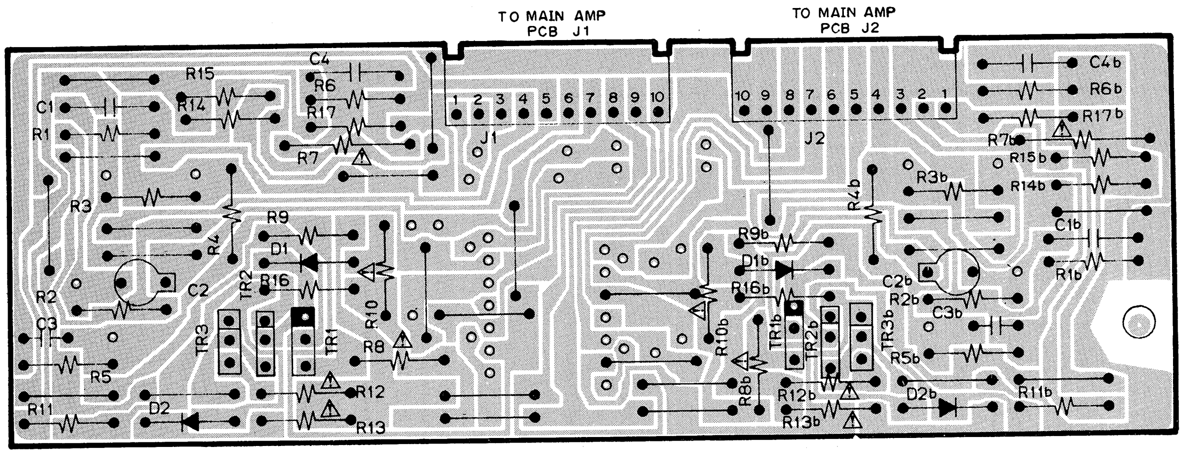
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

AA-A35/L CONNECTION DIAGRAM

NO. 7-1 840631A

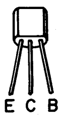
4C


TO MAIN AMP PCB J1
TO MAIN AMP PCB J2
J1
J2
TR1
TR2
TR3
TR1b
TR2b
TR3b

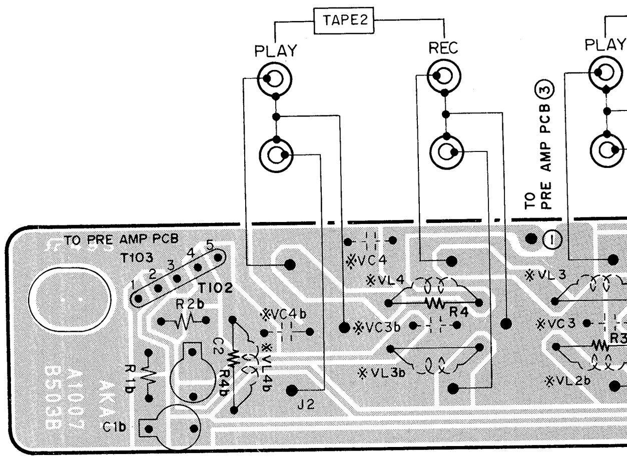
VARTICAL PCB

TR1	2SA970 (GR, BL)
TR2, 3	2SC2240 (GR, BL)

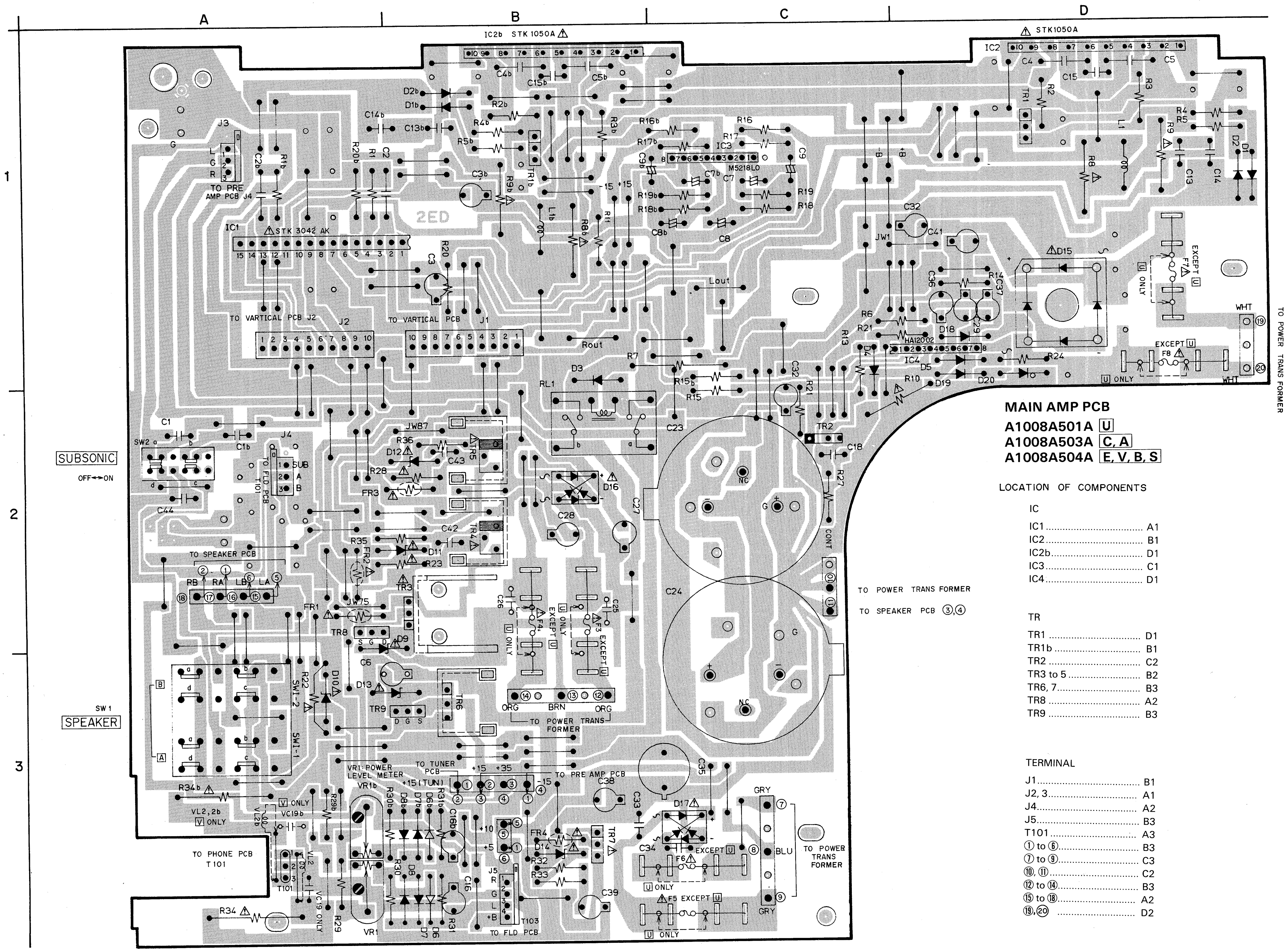
A1008A501B U
A1008A503B C A
A1008A504B E V B S



2SA970
2SC2240


TAPE2
PLAY
REC
PLAY
TO PRE AMP PCB ③
TO PRE AMP PCB
T103
T102
J2
A1007 B503B
AKAI

PIN JACK PCB A1007B503B


A
B
C
D
1
2
3
IC2b STK 1050A
STK 1050A
IC1 STK 3042 AK
IC3 M5218L0
IC4 HA12002
TO PRE AMP PCB J4
TO VARTICAL PCB J2
TO VARTICAL PCB J1
SUBSONIC
OFF↔ON
SW1
SPEAKER
TO SPEAKER PCB
TO FLD PCB
TO PHONE PCB T101
TO FLD PCB
TO TUNER PCB
TO PRE AMP PCB
TO POWER TRANS FORMER
VR1 POWER LEVEL METER
TO POWER TRANS FORMER
TO POWER TRANS FORMER
TO SPEAKER PCB ③,④
WHT
GRY
BLU
ORG
BRN
U ONLY
EXCEPT U
Lout
Rout
CONT
2ED

MAIN AMP PCB

A1008A501A U
A1008A503A C, A
A1008A504A E, V, B, S

LOCATION OF COMPONENTS

IC

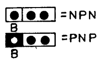
IC1	A1
IC2	B1
IC2b	D1
IC3	C1
IC4	D1

TR

TR1	D1
TR1b	B1
TR2	C2
TR3 to 5	B2
TR6, 7	B3
TR8	A2
TR9	B3

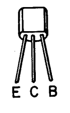
TERMINAL

J1	B1
J2, 3	A1
J4	A2
J5	B3
T101	A3
① to ⑥	B3
⑦ to ⑨	C3
⑩, ⑪	C2
⑫ to ⑭	B3
⑮ to ⑱	A2
⑲, ⑳	D2

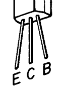


TR1	2SC2240 (GR, BL)
TR2	2SA970 (GR, BL)
TR3, 6	2SD313HP (E, F)
TR4	2SC3116
TR5	2SA1248 (S, T)
TR7	2SD571 (L, M)
TR8, 9	2SK246 (G, R)

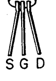
③⑤ : TO CONTROL PCB
⑥ : TO TUNER PCB



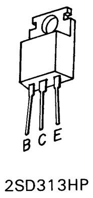
2SA970
2SC2240



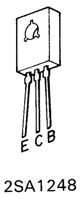
2SD571



2SK246



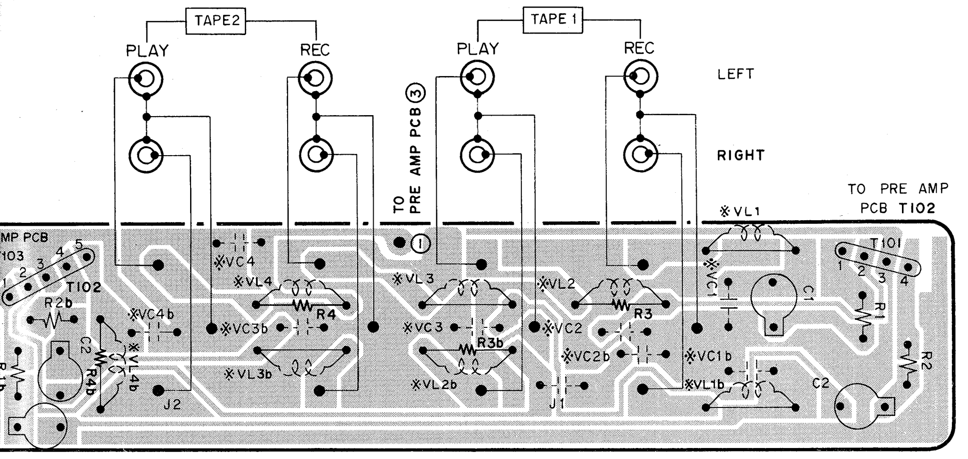
2SD313HP



2SA1248
2SC3116

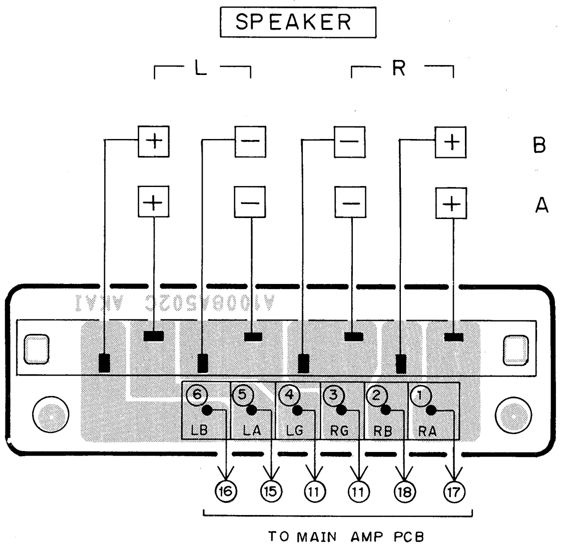
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SA
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTU
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRIC

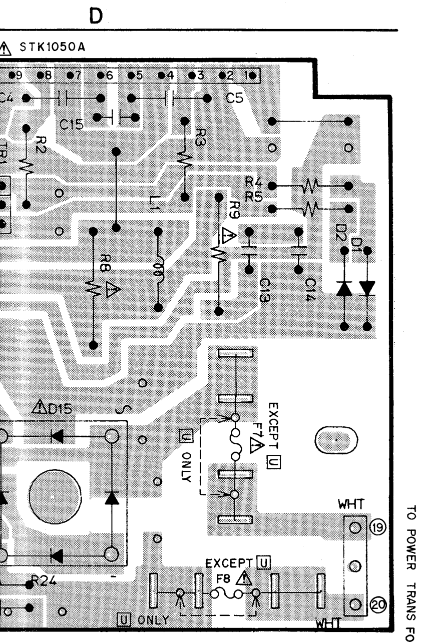

TAPE2
PLAY
REC
TAPE 1
PLAY
REC
LEFT
RIGHT
TO PRE AMP PCB ③
TO PRE AMP PCB T102
MP PCB
T103
T102
T101
※VL1
※VC1
※VL2
※VC2
※VL3
※VC3
※VL4
※VC4
※VC4b
※VC3b
※VL3b
※VC2b
※VL2b
※VC1b
※VL1b
※VL4b
R1
R2
R2b
R3
R3b
R4
R4b
C1
C2
J1
J2

JACK PCB A1007B503B

※ VL1 to VL4 VL1b to VL4b
※ VC1 to VC4 VC1b to VL4b } V model only


SPEAKER
L
R
B
A
A1008A502C AKAI
LB
LA
LG
RG
RB
RA
⑯ ⑮ ⑪ ⑪ ⑱ ⑰
TO MAIN AMP PCB

SPEAKER PCB
A1008A502C U C A E B S


D
STK1050A
C4
C15
C5
R2
R3
R4
R5
R6
R9
L1
C13
C14
D1
D2
D15
EXCEPT U
F7
U ONLY
WHT
⑲
⑳
EXCEPT U
F8
R24
U ONLY
WHT
TO POWER TRANS FORMER

IN AMP PCB
008A501A U
008A503A C, A
008A504A E, V, B, S

TION OF COMPONENTS

IC

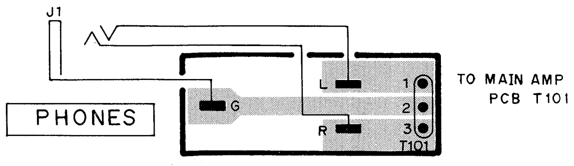
IC1	A1
IC2	B1
IC2b	D1
IC3	C1
IC4	D1

TR

TR1	D1
TR1b	B1
TR2	C2
TR3 to 5	B2
TR6, 7	B3
TR8	A2
TR9	B3

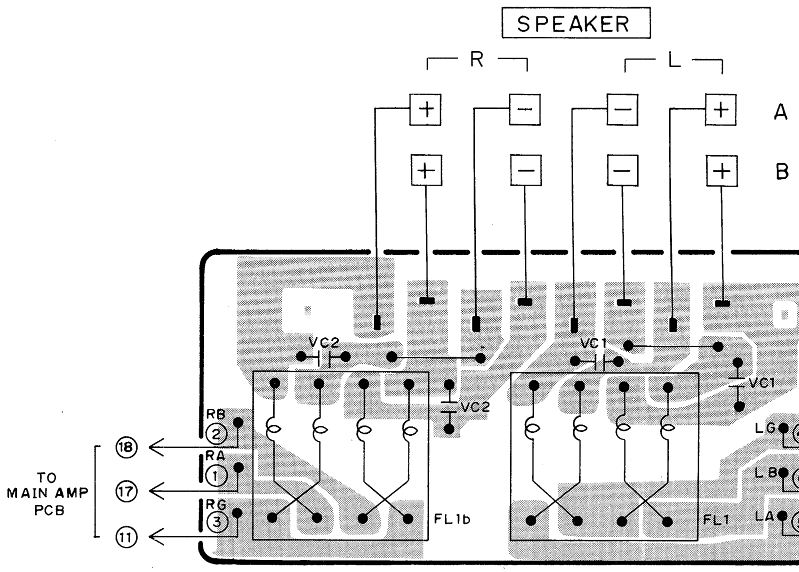
ERMINAL

1	B1
2, 3	A1
4	A2
5	B3
101	A3
to ⑥	B3
to ⑨	C3
, ⑪	C2
to ⑭	B3
to ⑱	A2
⑳	D2

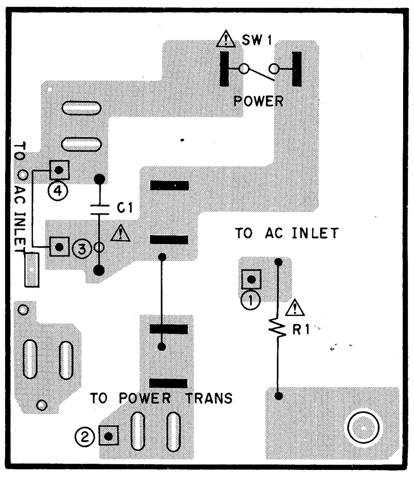

J1
PHONES
G
L
R
1
2
3
T101
TO MAIN AMP PCB T101

PHONE PCB

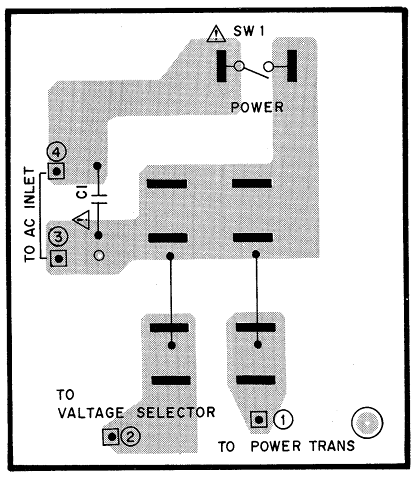
A1008A501C U
A1008A503C C A
A1008A504C E V B S


SPEAKER
R
L
A
B
VC2
VC1
RB ②
RA ①
RG ③
LG ④
LB ⑥
LA ⑤
FL1b
FL1
⑱
⑰
⑪
TO MAIN AMP PCB
⑪
⑯
⑮
TO MAIN AMP PCB

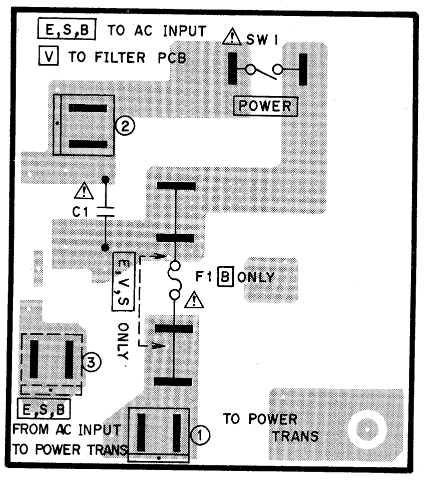
SPEAKER PCB A1008A504F V


SW1
POWER
TO AC INLET
④
③
C1
TO AC INLET
①
R1
TO POWER TRANS
②

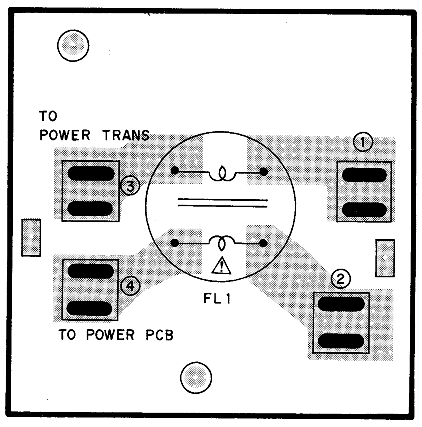
POWER PCB
A1008A503E C A


SW1
POWER
TO AC INLET
④
③
C1
TO VALTAGE SELECTOR
②
①
TO POWER TRANS

POWER PCB
A1008A501D U


E,S,B TO AC INPUT
V TO FILTER PCB
SW1
POWER
②
C1
E,V,S ONLY
F1 B ONLY
③
E,S,B FROM AC INPUT
TO POWER TRANS
①
TO POWER TRANS

POWER PCB
A1008A504E E V B S

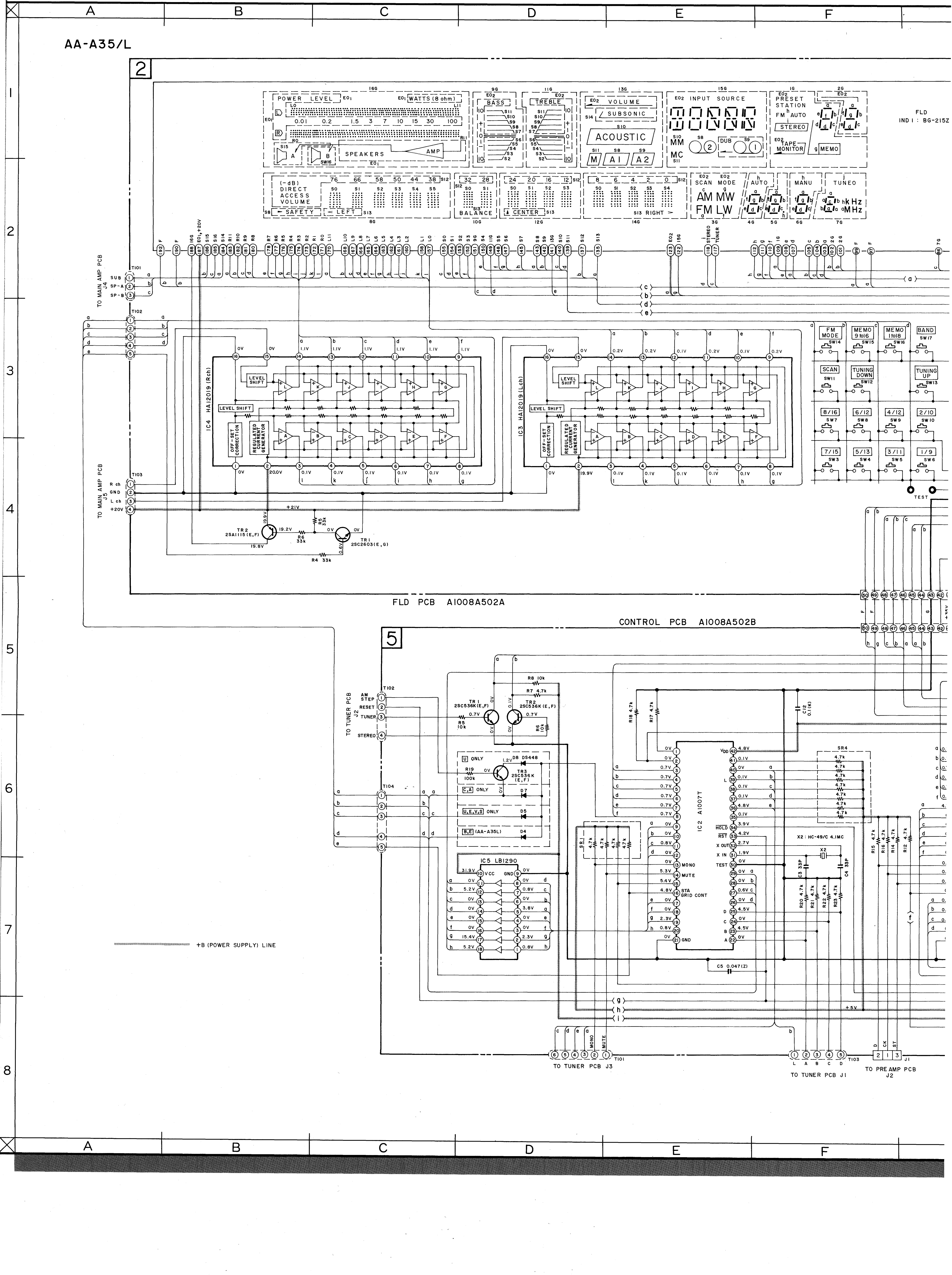

TO POWER TRANS
①
③
④
②
FL1
TO POWER PCB
TO AC IN

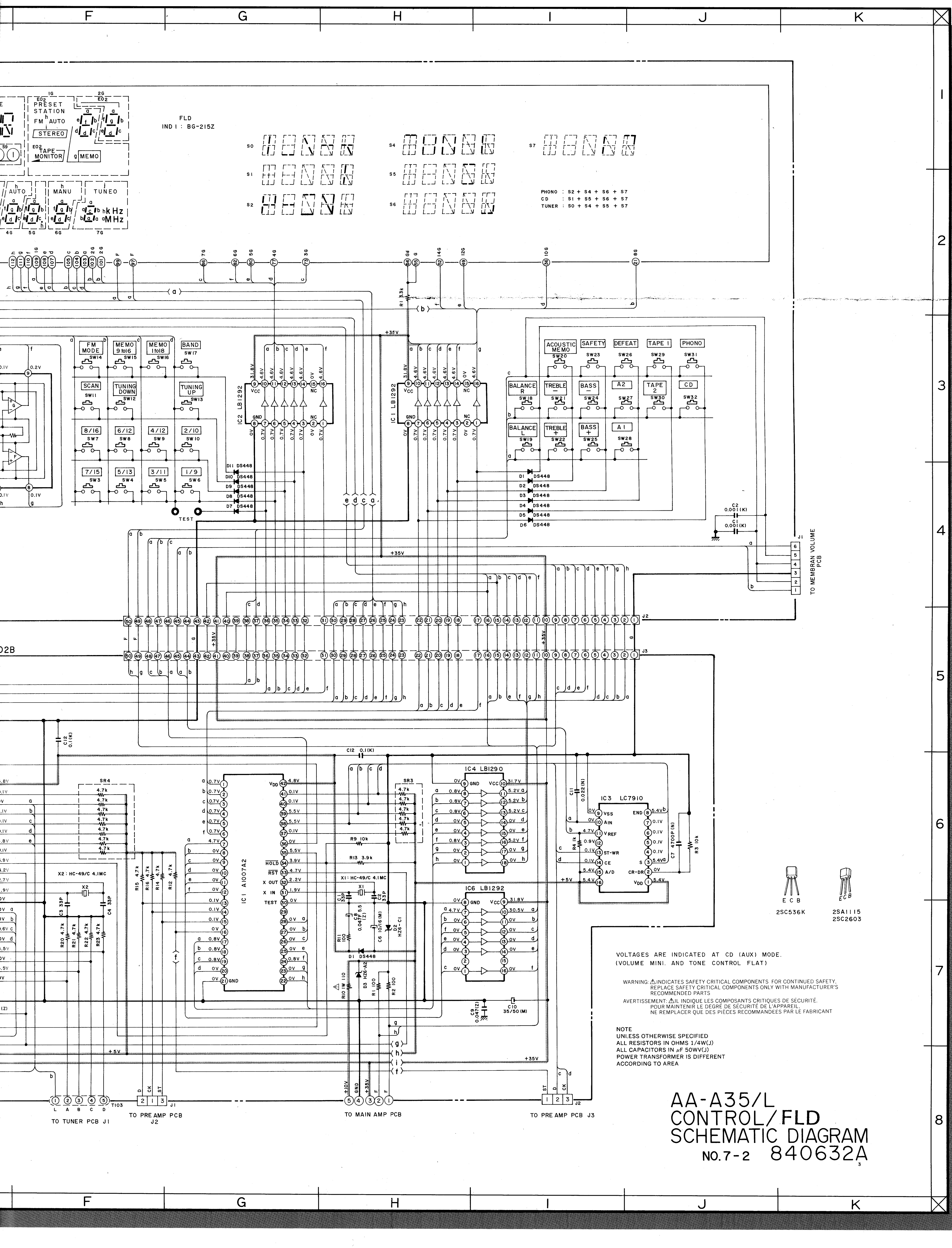
FILTER PCB
A1008A504G V

G: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

SSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

AA-A35/L


2
5
FLD
IND I : BG-215Z
POWER LEVEL
WATTS (8 ohm)
SPEAKERS
AMP
BASS
TREBLE
VOLUME
SUBSONIC
ACOUSTIC
M
A1
A2
INPUT SOURCE
MM
MC
DUB
PRESET STATION
FM AUTO
STEREO
TAPE MONITOR
MEMO
(-dB) DIRECT ACCESS VOLUME
SAFETY
LEFT
BALANCE
CENTER
RIGHT
SCAN MODE
AM MW
FM LW
AUTO
MANU
TUNEO
kHz
MHz
TO MAIN AMP PCB J4
SUB
SP-A
SP-B
TO MAIN AMP PCB J5
R ch
GND
L ch
+20V
IC4 HA12019 (Rch)
IC3 HA12019 (Lch)
LEVEL SHIFT
OFF-SET CORRECTION
REGULATED CURRENT GENERATOR
TR2 2SA1115(E,F)
TR1 2SC2603(E,G)
R4 33k
R5 33k
R6 33k
+21V
FM MODE SW14
MEMO 9to16 SW15
MEMO 1to18 SW16
BAND SW17
SCAN SW11
TUNING DOWN SW12
TUNING UP SW13
8/16 SW7
6/12 SW8
4/12 SW9
2/10 SW10
7/15 SW3
5/13 SW4
3/11 SW5
1/9 SW6
TEST
FLD PCB A1008A502A
CONTROL PCB A1008A502B
TO TUNER PCB J2
AM STEP
RESET
TUNER
STEREO
TR1 2SC536K(E,F)
TR2 2SC536K(E,F)
TR3 2SC536K (E,F)
R5 10k
R6 10k
R7 4.7k
R8 10k
R19 100k
D8 DS448
U ONLY
C,A ONLY
U,E,V,S ONLY
B,E (AA-A35L)
IC5 LB1290
SR1
SR4
IC2 A1007T
MONO
MUTE
STA GRID CONT
HOLD
RST
X OUT
X IN
TEST
GND
R17 4.7k
R18 4.7k
C12 0.1(K)
X2 : HC-49/C 4.1MC
C3 33P
C4 33P
R20 4.7k
R21 4.7k
R22 4.7k
R23 4.7k
R15 4.7k
R16 4.7k
R14 4.7k
R12 4.7k
C5 0.047(Z)
+5V
TO TUNER PCB J3
TO TUNER PCB J1
TO PREAMP PCB J2
+B (POWER SUPPLY) LINE


FLD
IND I : BG-215Z
PRESET STATION
FM AUTO
STEREO
TAPE MONITOR
MEMO
AUTO
MANU
TUNEO
kHz
MHz
S0
S1
S2
S4
S5
S6
S7
PHONO : S2 + S4 + S6 + S7
CD : S1 + S5 + S6 + S7
TUNER : S0 + S4 + S5 + S7
FM MODE SW14
MEMO 9 to 16 SW15
MEMO 1 to 8 SW16
BAND SW17
SCAN SW11
TUNING DOWN SW12
TUNING UP SW13
8/16 SW7
6/12 SW8
4/12 SW9
2/10 SW10
7/15 SW3
5/13 SW4
3/11 SW5
1/9 SW6
TEST
IC2 LB1292
IC1 LB1292
ACOUSTIC MEMO SW20
SAFETY SW23
DEFEAT SW26
TAPE 1 SW29
PHONO SW31
BALANCE R SW18
TREBLE − SW21
BASS − SW24
A2 SW27
TAPE 2 SW30
CD SW32
BALANCE L SW19
TREBLE + SW22
BASS + SW25
A1 SW28
D1 DS448
D2 DS448
D3 DS448
D4 DS448
D5 DS448
D6 DS448
D7 DS448
D8 DS448
D9 DS448
D10 DS448
D11 DS448
C2 0.001(K)
C1 0.001(K)
J1
TO MEMBRAN VOLUME PCB
+35V
J2
J3
C12 0.1(K)
SR4
X2 : HC-49/C 4.1MC
C3 33P
C4 33P
R20 4.7k
R21 4.7k
R22 4.7k
R23 4.7k
R15 4.7k
R16 4.7k
R14 4.7k
R12 4.7k
IC1 A1007A2
VDD
GND
HOLD
RST
X OUT
X IN
TEST
SR3
R9 10k
R13 3.9k
X1 : HC-49/C 4.1MC
C1 33P
C2 33P
C8 0.047F 5.5 (Z)
C6 10/16(M)
D2 HZ6-C1
D1 DS448
D3 HZ6-A2
R10 1W 110
R11 100
R1 100
R2 100
IC4 LB1290
IC6 LB1292
C9 0.047(Z)
C10 35/50(M)
IC3 LC7910
C11 0.022(N)
R4 1k
C7 4700P(N)
R3 10k
VSS
AIN
VREF
ST-WR
CE
A/D
END
CR-DR
+5V
+10V
GND
TO MAIN AMP PCB
TO TUNER PCB J1
T103
TO PRE AMP PCB J2
TO PRE AMP PCB J3
E C B
2SC536K
2SA1115
2SC2603
F
G
H
I
J
K
1
2
3
4
5
6
7
8

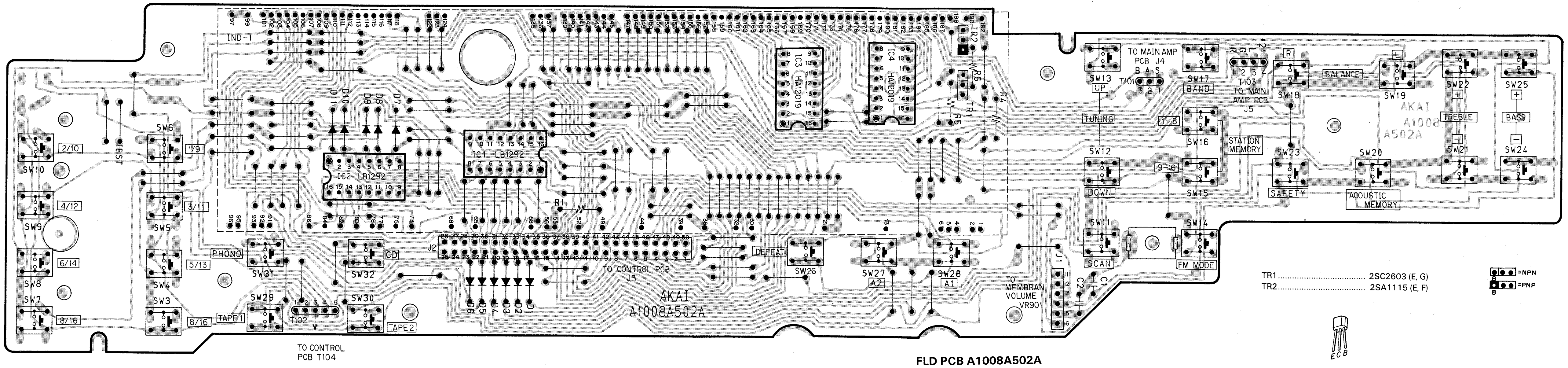
VOLTAGES ARE INDICATED AT CD (AUX) MODE.
(VOLUME MINI. AND TONE CONTROL FLAT)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

AA-A35/L
CONTROL/FLD
SCHEMATIC DIAGRAM
NO.7-2 840632A
3


IND-1
SW10
2/10
SW9
4/12
SW8
6/14
SW7
8/16
TEST
SW6
1/9
SW5
3/11
SW4
5/13
SW3
8/16
PHONO
SW31
CD
SW32
SW29
TAPE 1
T102
SW30
TAPE 2
TO CONTROL PCB T104
IC2 LB1292
IC1 LB1292
D7
D8
D9
D10
D11
R1
J2
TO CONTROL PCB J3
D1
D2
D3
D4
D5
D6
AKAI
A1008A502A
IC3 HA12019
IC4 HA12019
TR2
TR1
R6
R5
R7
DEFEAT
SW26
SW27
A2
SW28
A1
TO MEMBRAN VOLUME VR901
J1
C1
C2
SW13
UP
TUNING
TO MAIN AMP PCB J4
T101
SW17
BAND
T103
TO MAIN AMP PCB J5
1~8
SW16
STATION MEMORY
SW12
DOWN
9~16
SW15
SW11
SCAN
SW14
FM MODE
R
SW18
BALANCE
L
SW19
SW23
SAFETY
SW20
ACOUSTIC MEMORY
SW22
TREBLE
SW21
SW25
BASS
SW24
AKAI
A1008A502A

FLD PCB A1008A502A

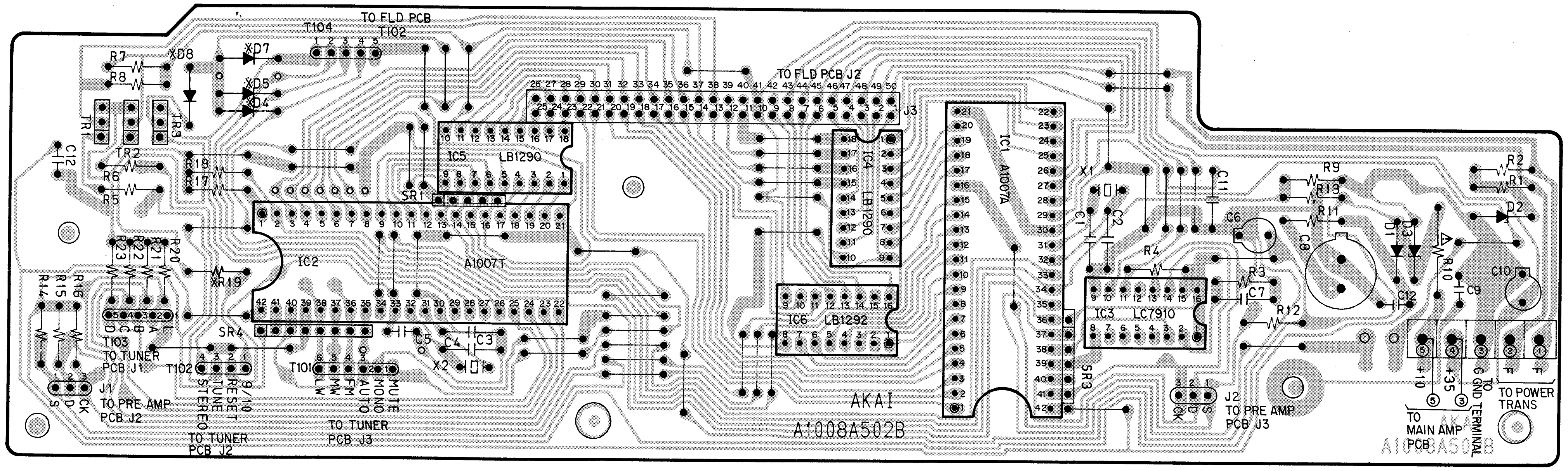
TR1 .... 2SC2603 (E, G)
TR2 .... 2SA1115 (E, F)

B
=NPN
B
=PNP

E C B

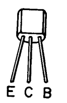
2SA1115
2SC2603

	D4	D5	D7	D8	TR3	R19
U	╲	○	╲	○	○	○
C.A	╲	╲	○	╲	╲	╲
E.V.S	╲	○	╲	╲	╲	╲
A35L	○	╲	╲	╲	╲	╲

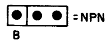

TO FLD PCB T102
T104
R7
R8
D8
D7
D5
D4
TR1
TR3
C12
TR2
R6
R5
R18
R17
IC5 LB1290
SR1
TO FLD PCB J2
J3
IC2
A1007T
R23
R22
R21
R20
R19
R14
R15
R16
T103
TO TUNER PCB J1
SR4
T102
STEREO
TUNE
RESET
9/10
TO TUNER PCB J2
T101
LW
MW
FM
AUTO
MONO
MUTE
TO TUNER PCB J3
C5
C4
C3
X2
J1
S
D
CK
TO PRE AMP PCB J2
IC4 LB1290
IC6 LB1292
IC1 A1007A
SR3
AKAI
A1008A502B
X1
C1
C2
C11
R4
IC3 LC7910
J2
TO PRE AMP PCB J3
R9
R13
R11
C6
C8
D1
D3
R10
C9
C10
R3
C7
R12
C12
R2
R1
D2
+10
+35
G
F
F
TO MAIN AMP PCB
TO GND TERMINAL
TO POWER TRANS
A1008A502B

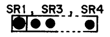
CONTROL PCB A1008A502B

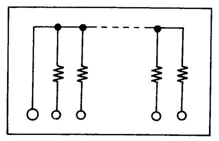
TR1, 2, 3 .... 2SC536K (E, F)



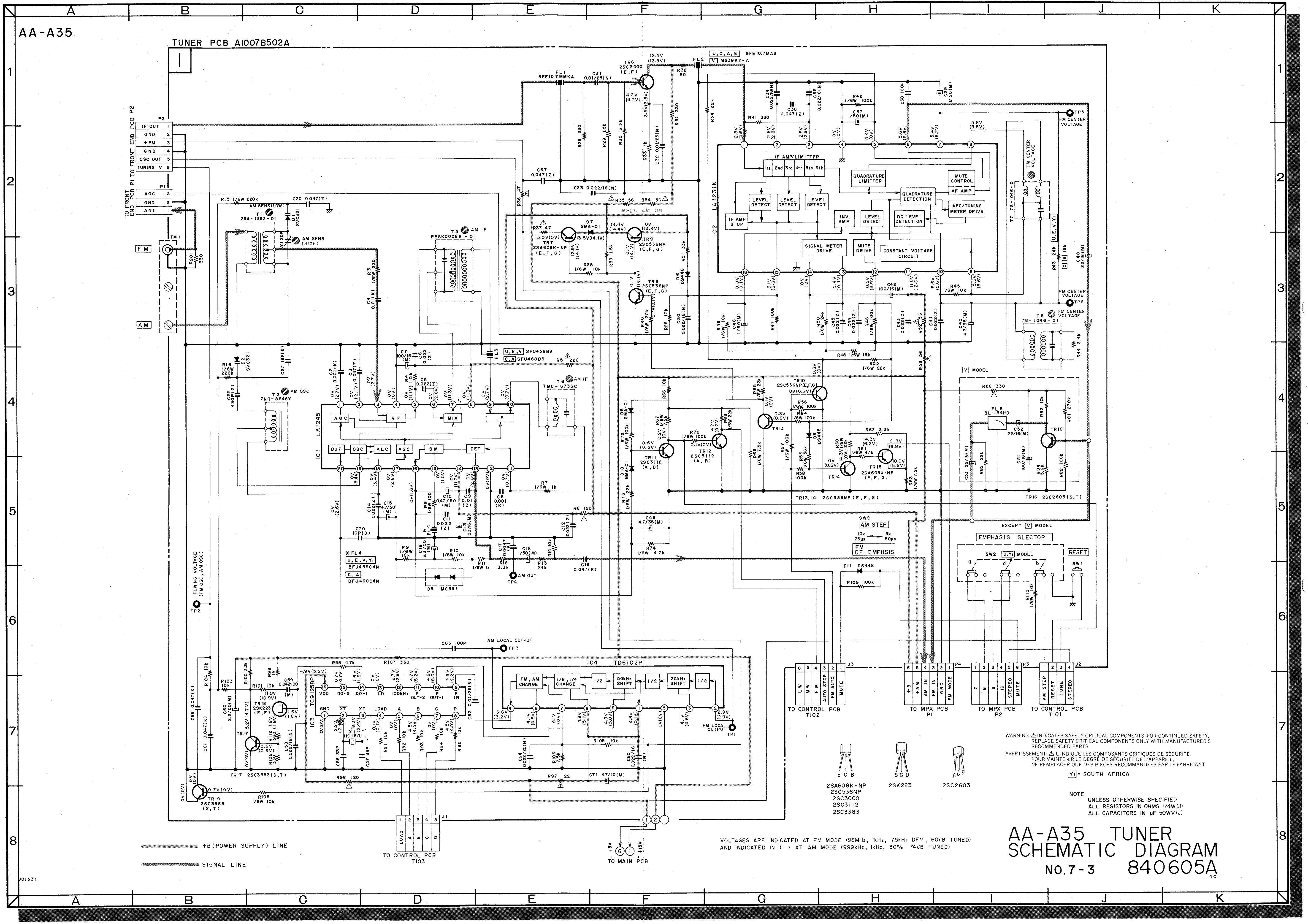
2SC536







SR1 (4,7 kohms×4)
SR3 (4,7 kohms×5)
SR4 (4,7 kohms×7)


AA-A35
TUNER PCB A1007B502A
TO FRONT END PCB P1 TO FRONT END PCB P2
P2
IF OUT
GND
+FM
GND
OSC OUT
TUNING V
P1
AGC
GND
ANT
TM1
FM
AM
FL1 SFE10.7MMKA
C31 0.01/25(N)
TR6 2SC3000 (E,F)
12.5V (12.5V)
R32 150
FL2
U,C,A,E SFE10.7MA8
V MS3GKY-A
T1 2SA-1353-01
AM SENS(LOW)
AM SENS (HIGH)
R15 1/6W 220k
C20 0.047(Z)
D1 SVC321
T5 AM IF PEGK0008B-01
T3 7NR-8646Y AM OSC
T6 AM IF 7MC-6733C
IC1 LA1245
AGC
RF
MIX
IF
BUF
OSC
ALC
AGC
SM
DET
IC2 LA1231N
IF AMP/LIMITTER
1st 2nd 3rd 4th 5th 6th
QUADRATURE LIMITTER
MUTE CONTROL
AF AMP
QUADRATURE DETECTION
LEVEL DETECT
LEVEL DETECT
LEVEL DETECT
AFC/TUNING METER DRIVE
IF AMP STOP
INV. AMP
LEVEL DETECT
DC LEVEL DETECTION
SIGNAL METER DRIVE
MUTE DRIVE
CONSTANT VOLTAGE CIRCUIT
TP5 FM CENTER VOLTAGE
FM CENTER VOLTAGE
T7 78-1046-01
T8 78-1046-01 FM CENTER VOLTAGE
TP6
TR7 2SA608K-NP (E,F,G)
D7 GMA-01
TR9 2SC536NP (E,F,G)
TR8 2SC536NP (E,F,G)
D6 DS448
WHEN AM ON
FL3 U,E,V SFU459B9 C,A SFU460B9
*FL4 U,E,V,Y1 BFU459C4N C,A BFU460C4N
D5 MC931
AM OUT TP4
TUNING VOLTAGE (FM OSC, AM OSC)
TP2
TR10 2SC536NP(E,F,G)
TR11 2SC3112 (A,B)
TR12 2SC3112 (A,B)
TR13
TR14
TR15 2SA608K-NP (E,F,G)
TR13,14 2SC536NP (E,F,G)
D8 GMA-01
D9 DS448
D10 GMA-01
V MODEL
FL5 BL-34HD
TR16
TR16 2SC2603(S,T)
EXCEPT V MODEL
SW2 AM STEP
10k 9k
75μs 50μs
FM DE-EMPHSIS
D11 DS448
R109 100k
EMPHASIS SLECTOR
SW2 U,Y1 MODEL
RESET
SW1
AM LOCAL OUTPUT
TP3
IC4 TD6102P
FM, AM CHANGE
1/8, 1/4 CHANGE
1/2
50kHz SHIFT
1/2
25kHz SHIFT
1/2
IC3 TC9125BP
VDD
DO-2
DO-1
LD
100kHz
OUT-2
OUT-1
IN
GND
XT
LOAD
X1 HC-18/U
FM LOCAL OUTPUT
TP1
TR17 2SC3383(S,T)
TR18 2SK223 (E,F)
TR19 2SC3383 (S,T)
J3
L W
M W
F M
AUTO STOP
FM AUTO
MUTE
TO CONTROL PCB T102
P4
+B
+AM
AM IN
FM IN
GND
FM MODE
TO MPX PCB P1
P3
7
8
9
10
STEREO
MUTE
TO MPX PCB P2
J2
AM STEP
RESET
TUNE
STEREO
TO CONTROL PCB T101
J1
LOAD
A
B
C
D
TO CONTROL PCB T103
+5V
+6V
TO MAIN PCB
E C B
S G D
E C B
2SA608K-NP
2SC536NP
2SC3000
2SC3112
2SC3383
2SK223
2SC2603
+B(POWER SUPPLY) LINE
SIGNAL LINE
001531
A B C D E F G H I J K
1 2 3 4 5 6 7 8

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

Y1 = SOUTH AFRICA

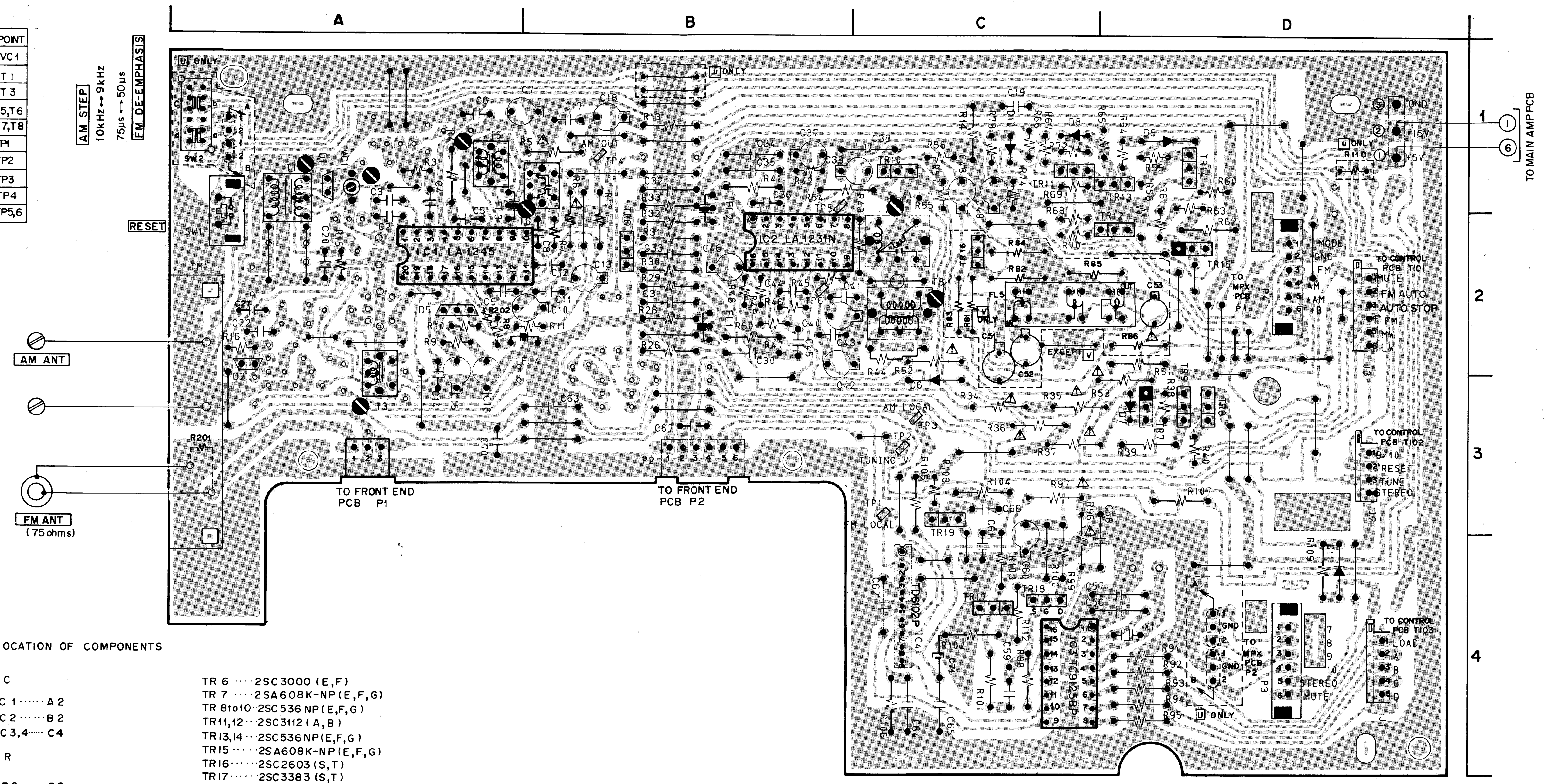
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

VOLTAGES ARE INDICATED AT FM MODE (98MHz, 1kHz, 75kHz DEV., 60dB TUNED)
AND INDICATED IN ( ) AT AM MODE (999kHz, 1kHz, 30% 74dB TUNED)

AA-A35 TUNER SCHEMATIC DIAGRAM

NO.7-3 840605A
4C

ADJUSTMENT ITEM	POINT
AM SENS (HIGH)	VC1
AM SENS (LOW)	T1
AM OSC	T3
AM IF	T5,T6
FM CENTER VOLTAGE	T7,T8
FM LOCAL OUTPUT	TP1
TUNING VOLTAGE (FM, AM OSC)	TP2
AM LOCAL OUTPUT	TP3
AM OUT PUT	TP4
FM CENTER VOLTAGE	TP5,6


A
B
C
D
1
2
3
4
AM STEP
10kHz ↔ 9kHz
75μs ↔ 50μs
FM DE-EMPHASIS
RESET
U ONLY
SW2
SW1
TM1
AM ANT
FM ANT
(75ohms)
R201
T1
VC1
T3
T5
IC1 LA1245
IC2 LA1231N
IC3 TC9125BP
TD6102P IC4
FL1
FL2
FL3
FL4
FL5
X1
TO FRONT END PCB P1
TO FRONT END PCB P2
P1
P2
AM LOCAL
TP3
TP2
TUNING V
TP1
FM LOCAL
TP4
AM OUT
EXCEPT V
GND
+15V
+5V
TO MAIN AMP PCB
MODE
GND
FM
AM
+AM
+B
TO MPX PCB P1
P4
TO CONTROL PCB T101
MUTE
FM AUTO
AUTO STOP
FM
MW
LW
J3
TO CONTROL PCB T102
9/10
RESET
TUNE
STEREO
J2
TO MPX PCB P2
P3
STEREO
MUTE
TO CONTROL PCB T103
LOAD
A
B
C
D
J1
AKAI A1007B502A.507A
2ED

TUNER PCB A1007B502A U C A E V S

LOCATION OF COMPONENTS

IC

IC 1 ······ A 2
IC 2 ······ B 2
IC 3,4 ····· C4

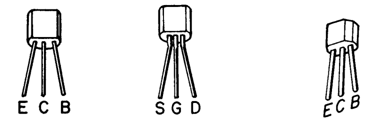
TR

TR6 ······ B2
TR 7to9 ·· D3
TR10,11 ··· C 1
TR12 ····· D2
TR13,14 ··· D1
TR15 ······ D2
TR16 ······· C2
TR17,18 ···· C4
TR19 ······ C3

TERMINAL

P1 ······· A3
P2 ······· B 3
P3 ······· D 4
P4 ······· D2
J1 ······ D4
J2 ······ D3
J3 ······ D2
①to④ ··· D1

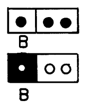
TR 6 ····2SC3000 (E,F)
TR 7 ····2SA608K-NP(E,F,G)
TR 8to10··2SC536 NP(E,F,G)
TR11,12···2SC3112 (A,B)
TR13,14···2SC536NP(E,F,G)
TR15 ·····2SA608K-NP(E,F,G)
TR16······2SC2603(S,T)
TR17······2SC3383 (S,T)
TR18······2SK223 (E)
TR19······2SC338 (S,T)



2SA608K.NP
2SC536.NP
2SC3000
2SC3112
2SC3383

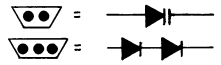
2SK223

2SC2603



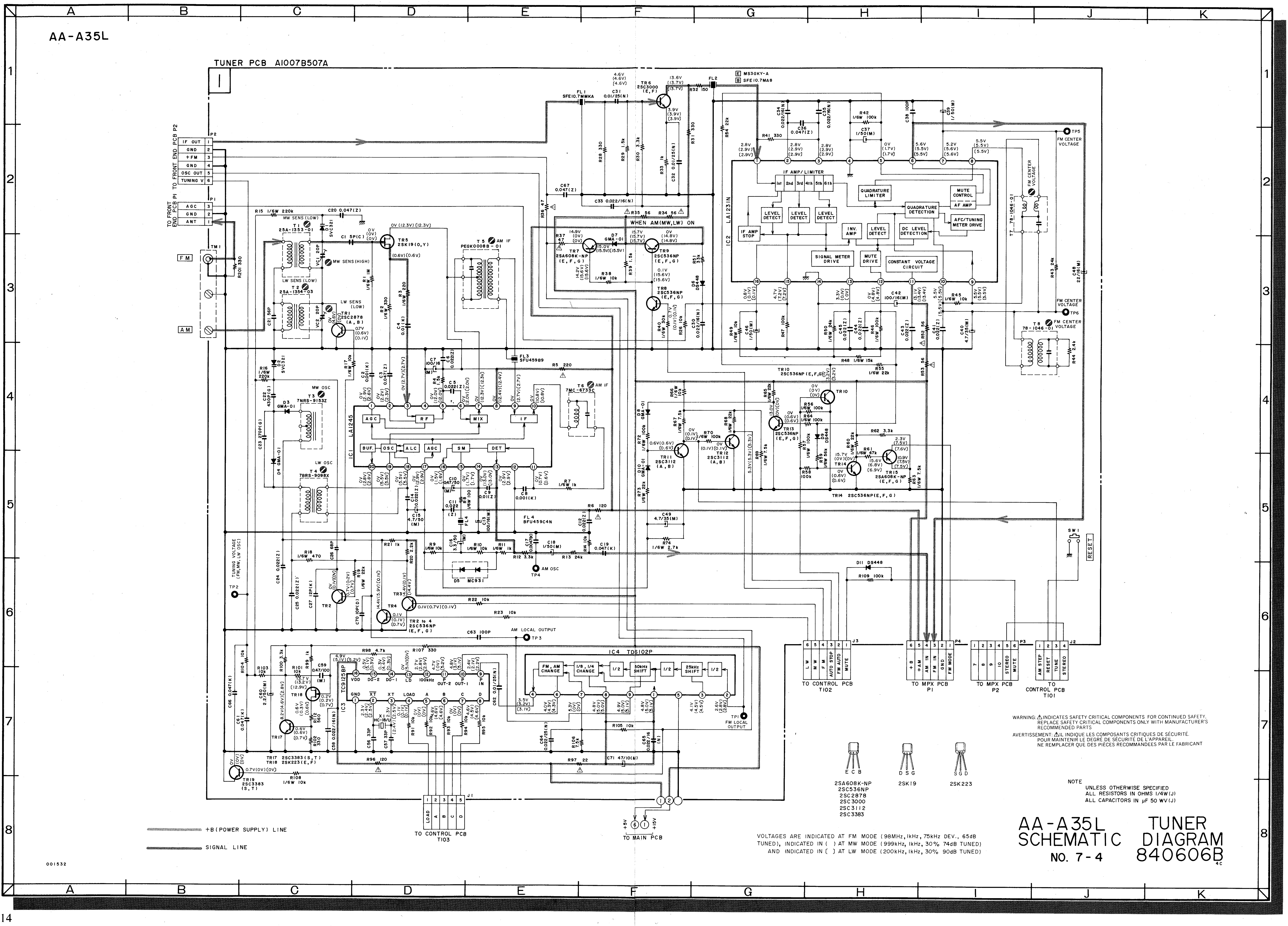
= NPN

= PNP



WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


AA-A35L
TUNER PCB A1007B507A
TO FRONT END PCB P2
IF OUT
GND
+FM
GND
OSC OUT
TUNING V
TO FRONT END PCB P1
AGC
GND
ANT
TM1
FM
AM
TR5 2SK19 (O, Y)
T1 2SA-1353-01
T2 2SA-1354-03
TR1 2SC2878 (A, B)
T3 7NRS-9153Z
T4 7BRS-9098X
T5 PEGK00088-01
T6 7MC-6733C
IC1 LA1245
AGC
RF
MIX
IF
BUF.
OSC
ALC
AGC
SM
DET
FL1 SFE10.7MMKA
FL2
FL3 SFU459B9
FL4 BFU459C4N
TR6 2SC3000 (E, F)
TR7 2SA608K-NP (E, F, G)
TR9 2SC536NP (E, F, G)
TR8 2SC536NP (E, F, G)
WHEN AM(MW,LW) ON
IC2 LA1231N
IF AMP/LIMITER
1st 2nd 3rd 4th 5th 6th
LEVEL DETECT
QUADRATURE LIMITER
QUADRATURE DETECTION
MUTE CONTROL
AF AMP
AFC/TUNING METER DRIVE
IF AMP STOP
INV. AMP
DC LEVEL DETECTION
SIGNAL METER DRIVE
MUTE DRIVE
CONSTANT VOLTAGE CIRCUIT
T7 78-1046-01
T8 78-1046-01
FM CENTER VOLTAGE
TP5
TP6
TR10 2SC536NP (E, F, G)
TR11 2SC3112 (A, B)
TR12 2SC3112 (A, B)
TR13 2SC536NP (E, F, G)
TR14 2SC536NP (E, F, G)
TR15 2SA608K-NP (E, F, G)
D5 MC931
TP4 AM OSC
TP2
TUNING VOLTAGE (FM, MW, LW OSC)
TR2 to 4 2SC536NP (E, F, G)
AM LOCAL OUTPUT
TP3
SW1 RESET
D11 DS448
R109 100k
IC4 TD6102P
FM, AM CHANGE
1/8, 1/4 CHANGE
1/2
50kHz SHIFT
1/2
25kHz SHIFT
1/2
IC3 TC9125BP
VDD DO-2 DO-1 LD 100kHz OUT-2 OUT-1 IN
GND XT XT LOAD A B C D
X1 HC-18/U
TR17 2SC3383 (S, T)
TR18 2SK223 (E, F)
TR19 2SC3383 (S, T)
TP1 FM LOCAL OUTPUT
J3
TO CONTROL PCB T102
L W
M W
F M
AUTO STOP
FM AUTO
MUTE
P4
TO MPX PCB P1
+B
+AM
AM IN
FM IN
GND
FM MODE
P3
TO MPX PCB P2
7 8 9 10 STEREO MUTE
J2
TO CONTROL PCB T101
AM STEP
RESET
TUNE
STEREO
J1
LOAD A B C D
TO CONTROL PCB T103
+5V +15V
TO MAIN PCB
+B (POWER SUPPLY) LINE
SIGNAL LINE
E C B
2SA608K-NP
2SC536NP
2SC2878
2SC3000
2SC3112
2SC3383
D S G
2SK19
S G D
2SK223
001532

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV(J)

VOLTAGES ARE INDICATED AT FM MODE (98MHz, 1kHz, 75kHz DEV., 65dB TUNED), INDICATED IN ( ) AT MW MODE (999kHz, 1kHz, 30% 74dB TUNED) AND INDICATED IN [ ] AT LW MODE (200kHz, 1kHz, 30% 90dB TUNED)

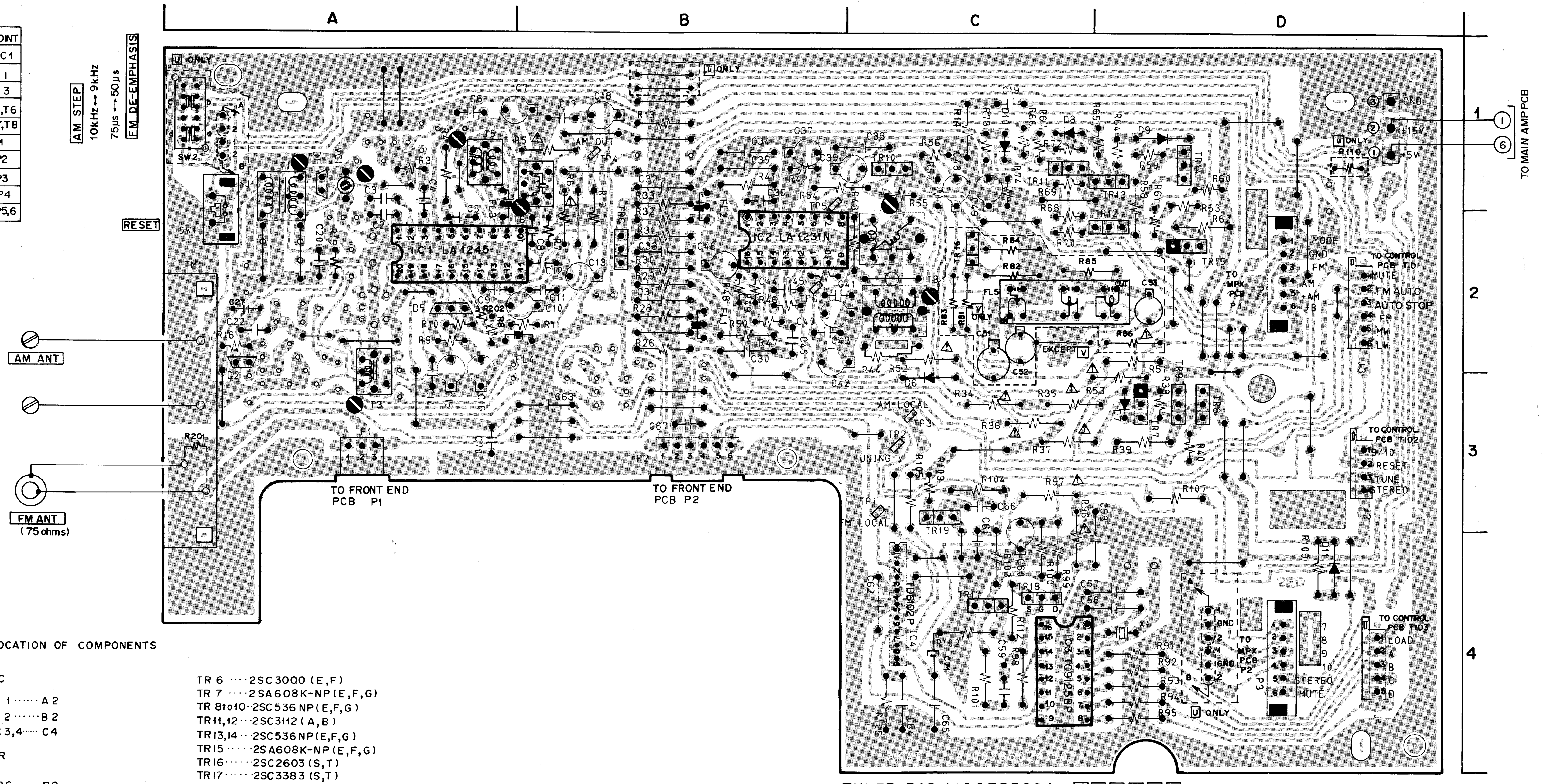
AA-A35L TUNER SCHEMATIC DIAGRAM

NO. 7-4

840606B

4C

ADJUSTMENT ITEM	POINT
AM SENS (HIGH)	VC1
AM SENS (LOW)	T1
AMOSC	T3
AM IF	T5,T6
FM CENTER VOLTAGE	T7,T8
FM LOCAL OUTPUT	TP1
TUNING VOLTAGE (FM, AM OSC)	TP2
AM LOCAL OUTPUT	TP3
AM OUT PUT	TP4
FM CENTER VOLTAGE	TP5,6


A
B
C
D
1
2
3
4
AM STEP
10kHz ↔ 9kHz
75µs ↔ 50µs
FM DE-EMPHASIS
RESET
U ONLY
SW2
SW1
TM1
AM ANT
FM ANT
(75 ohms)
R201
IC1 LA1245
IC2 LA1231N
IC3 TC9125BP
TD6102P IC4
TO FRONT END PCB P1
TO FRONT END PCB P2
AM OUT
TP4
AM LOCAL
TP3
TP2
TUNING V
TP1
FM LOCAL
EXCEPT V
GND
+15V
+5V
TO MAIN AMP PCB
MODE
GND
FM
AM
+AM
+B
TO MPX PCB P1
TO CONTROL PCB T101
MUTE
FM AUTO
AUTO STOP
FM
MW
LW
TO CONTROL PCB T102
9/10
RESET
TUNE
STEREO
TO CONTROL PCB T103
LOAD
A
B
C
D
TO MPX PCB P2
STEREO
MUTE
X1
2ED
AKAI A1007B502A.507A

TUNER PCB A1007B502A U C A E V S

LOCATION OF COMPONENTS

IC

IC 1 ······ A 2
IC 2 ······ B 2
IC 3,4 ····· C 4

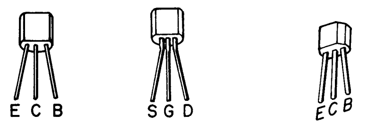
TR

TR6 ······ B2
TR 7to9 ·· D3
TR10,11 ··· C 1
TR12 ····· D2
TR13,14 ··· D1
TR15 ····· D2
TR16 ······ C2
TR17,18 ···· C4
TR19 ······ C3

TERMINAL

P1 ······· A3
P2 ······· B3
P3 ······· D4
P4 ······· D2
J1 ······· D4
J2 ······· D3
J3 ······· D2
① to ④ ··· D1

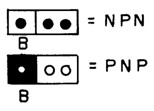
TR 6 ····2SC3000 (E,F)
TR 7 ····2SA608K-NP (E,F,G)
TR 8to10 ·· 2SC536 NP (E,F,G)
TR11,12 ··· 2SC3112 (A,B)
TR13,14 ··· 2SC536NP (E,F,G)
TR15 ····· 2SA608K-NP (E,F,G)
TR16 ····· 2SC2603 (S,T)
TR17 ····· 2SC3383 (S,T)
TR18 ····· 2SK223 (E)
TR19 ······ 2SC338 (S,T)

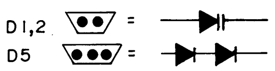


2SA608K.NP
2SC536.NP
2SC3000
2SC3112
2SC3383

2SK223

2SC2603

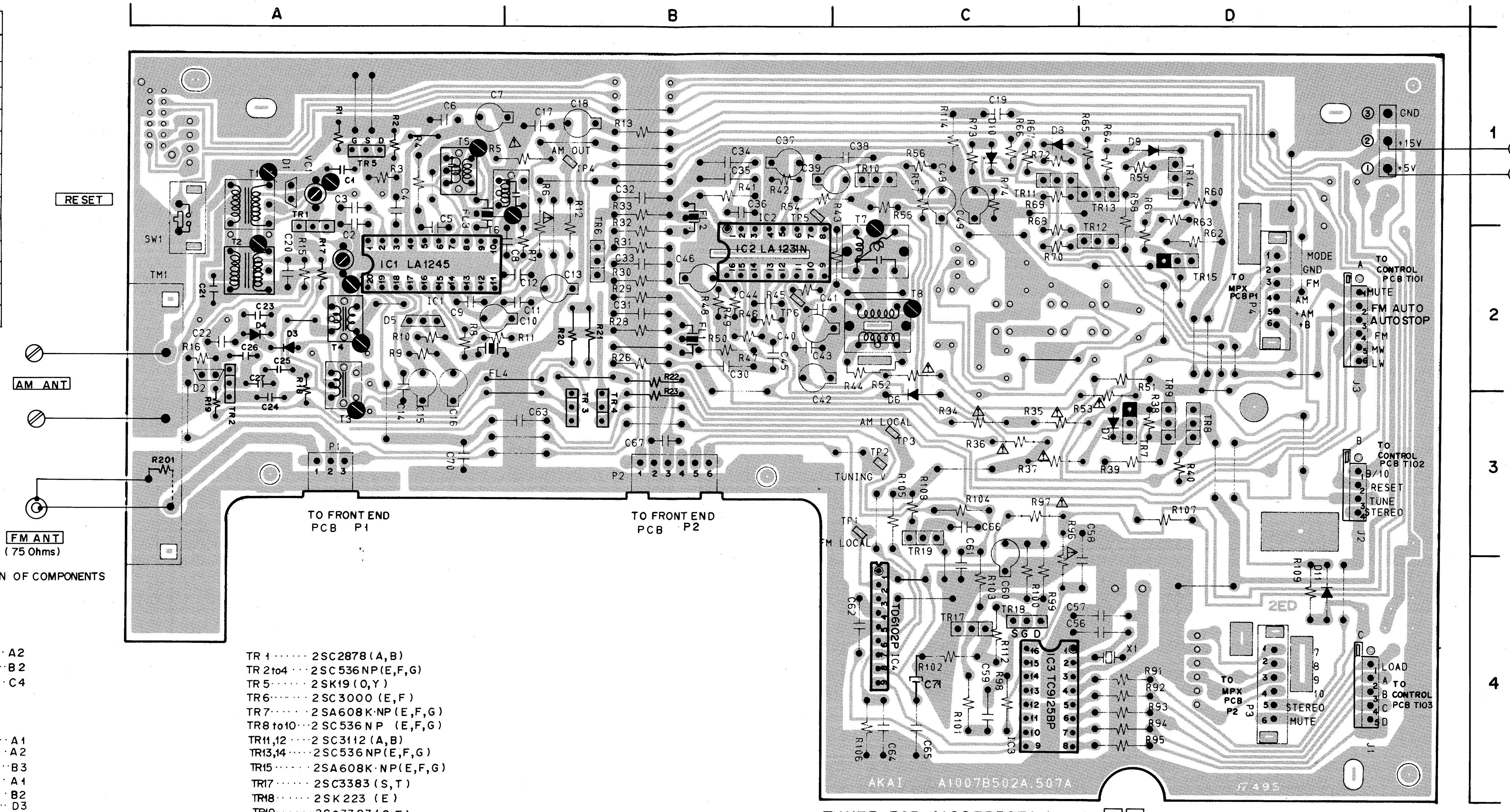




WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

ADJUSTMENT ITEM	POINT
MW SENS (LOW)	T 1
MW SENS (HIGH)	VC 1
LW SENS (LOW)	T 2
LW SENS (HIGH)	VC 2
LW OSC	T 4
MW OSC	T 3
AM IF	T5, T6
FM CENTER VOLTAGE	T 7, T 8
FM LOCAL OUTPUT	TP 1
TUNING VOLTAGE (FM.LW.MW OSC)	TP 2
AM LOCAL OUTPUT	TP 3
AM OUTPUT	TP 4
FM CENTER VOLTAGE	TP 5,6


A
B
C
D
1
2
3
4
RESET
AM ANT
FM ANT
(75 Ohms)
SW1
TM1
IC1 LA1245
IC2 LA1231N
IC3 TC9125BP
TD6102P IC4
TO FRONT END PCB P1
TO FRONT END PCB P2
P1
P2
AM OUT
AM LOCAL
TUNING V
FM LOCAL
③ GND
② +15V
① +5V
①
⑥
TO CONTROL PCB T101
TO CONTROL PCB T102
TO CONTROL PCB T103
TO MPX PCB P1
TO MPX PCB P2
MODE
GND
FM
AM
+AM
+B
MUTE
FM AUTO
AUTOSTOP
FM
MW
LW
9/10
RESET
TUNE
STEREO
LOAD
STEREO
MUTE
J1
J2
J3
P3
P4
2ED
AKAI A1007B502A.507A

TUNER PCB A1007B507A (2ED) B E

LOCATION OF COMPONENTS

IC

IC 1 ······ A2
IC 2 ······ B2
IC 3,4 ···· C4

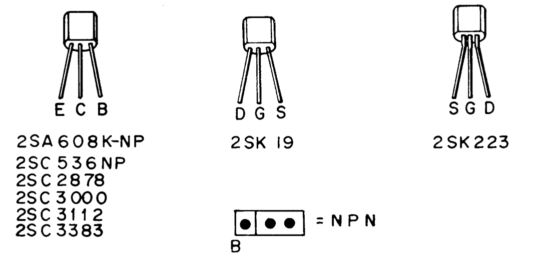
TR

TR 1 ······· A1
TR 2 ······· A2
TR 3,4 ····· B3
TR 5 ······· A1
TR 6 ······· B2
TR 7to9 ···· D3
TR10,11 ····· C1
TR12 ······· D2
TR13,14 ···· D1
TR15 ······ D2
TR17,18 ···· C4
TR19 ······· C3

TERMINAL

P1 ······· A3
P2 ······· B3
P3 ······· D4
P4 ······· D2
J1 ······· D4
J2 ······· D3
J3 ······· D2
① to ④ ···· D1

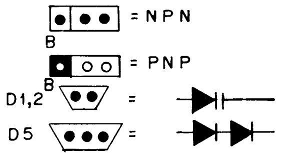
TR 1 ······ 2SC2878 (A,B)
TR 2to4 ··· 2SC536NP(E,F,G)
TR 5 ······ 2SK19 (O,Y)
TR6 ······ 2SC3000 (E,F)
TR7 ······ 2SA608K·NP (E,F,G)
TR8 to10 ··· 2SC536NP (E,F,G)
TR11,12 ···· 2SC3112 (A,B)
TR13,14 ····· 2SC536NP(E,F,G)
TR15 ······ 2SA608K·NP(E,F,G)
TR17 ······ 2SC3383 (S,T)
TR18 ······ 2SK223 (E)
TR19 ······ 2SC3383 (S,T)



2SA608K-NP
2SC536NP
2SC2878
2SC3000
2SC3112
2SC3383

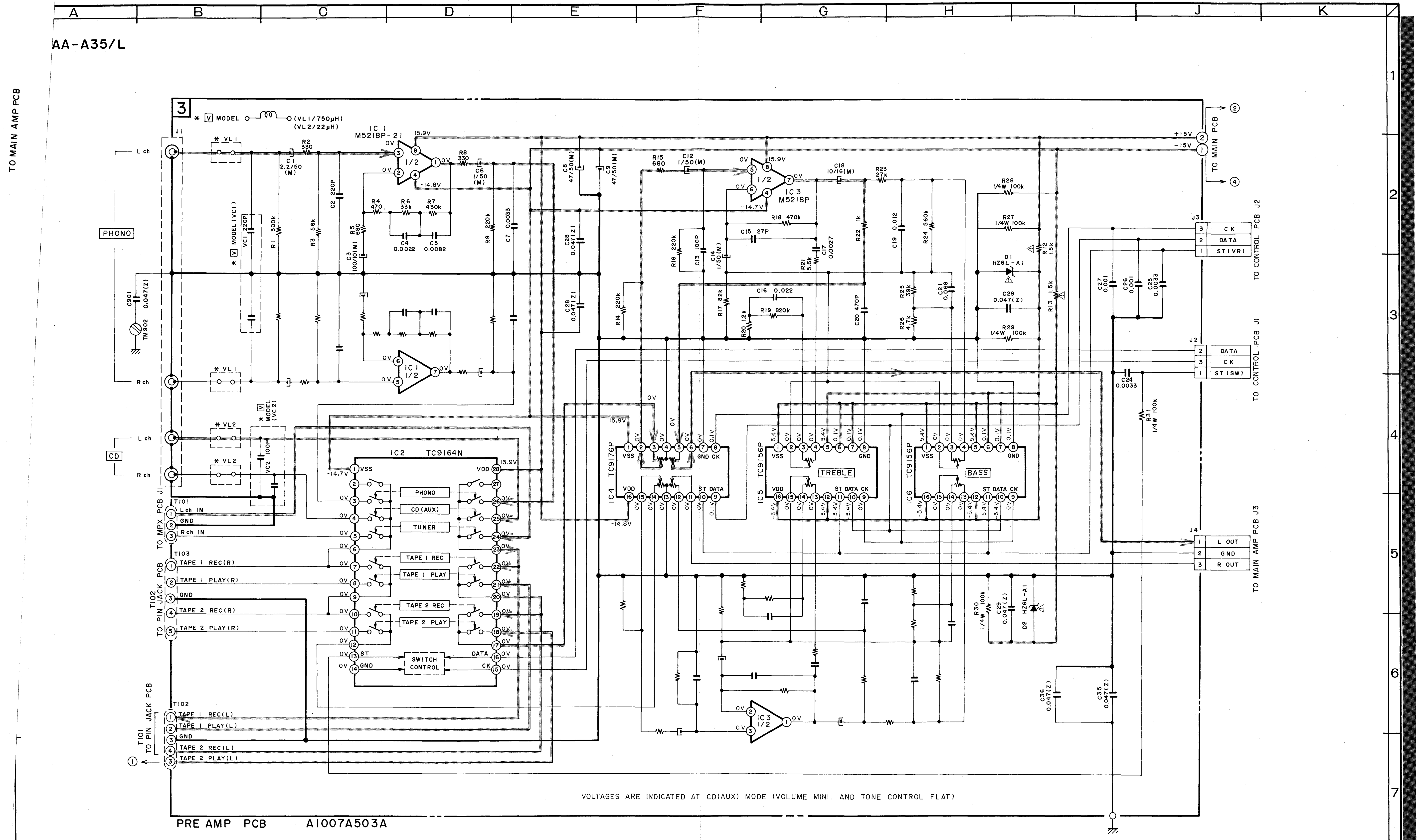
2SK 19

2SK223


= NPN
B
= PNP
B
D1,2 =
D5 =

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


AA-A35/L
TO MAIN AMP PCB
3
* V MODEL (VL1/750μH) (VL2/22μH)
J1
PHONO
L ch
R ch
CD
*VL1
*VL2
* V MODEL (VC1)
* V MODEL (VC2)
C901 0.047(Z)
TM902
IC1 M5218P-21
IC2 TC9164N
IC3 M5218P
IC4 TC9176P
IC5 TC9156P
IC6 TC9156P
TREBLE
BASS
PHONO
CD (AUX)
TUNER
TAPE 1 REC
TAPE 1 PLAY
TAPE 2 REC
TAPE 2 PLAY
SWITCH CONTROL
TO MPX PCB J1
T101 Lch IN
GND
Rch IN
T103
TO PIN JACK PCB T102
TAPE 1 REC(R)
TAPE 1 PLAY(R)
TAPE 2 REC(R)
TAPE 2 PLAY(R)
TO PIN JACK PCB T101
T102
TAPE 1 REC(L)
TAPE 1 PLAY(L)
TAPE 2 REC(L)
TAPE 2 PLAY(L)
+15V
-15V
TO MAIN AMP PCB
J3 CK DATA ST(VR)
TO CONTROL PCB J2
J2 DATA CK ST(SW)
TO CONTROL PCB J1
J4 L OUT GND R OUT
TO MAIN AMP PCB J3
D1 HZ6L-A1
D2 HZ6L-A1
VOLTAGES ARE INDICATED AT CD(AUX) MODE (VOLUME MINI. AND TONE CONTROL FLAT)
PRE AMP PCB A1007A503A

=+B (POWER SUPPLY) LINE
=SIGNAL LINE
SIGNAL LINE IS INDICATED LEFT CHANNEL ONLY.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

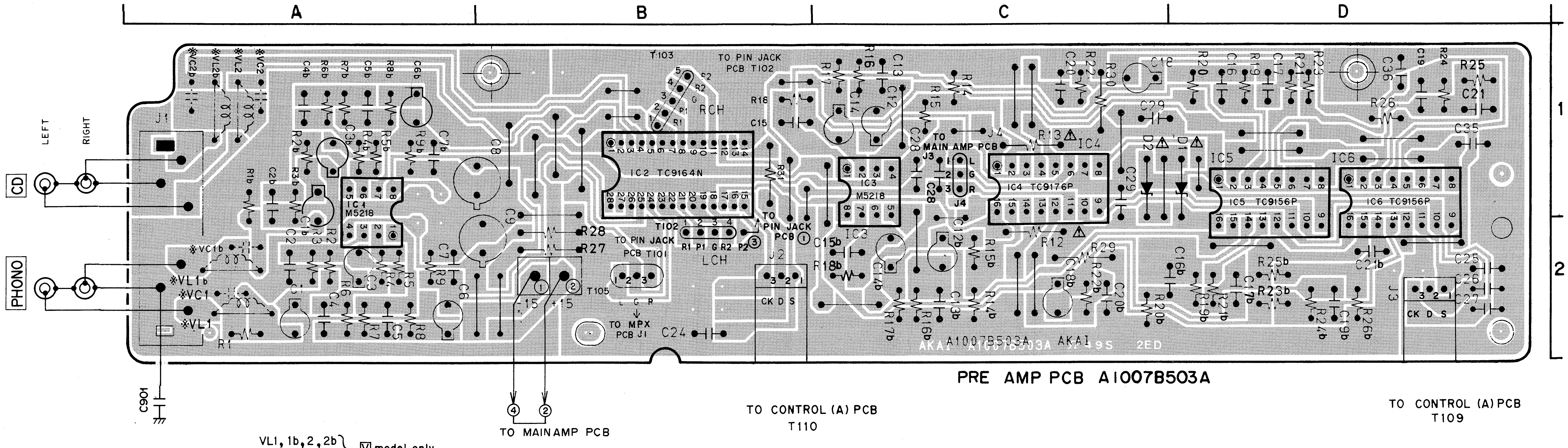
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)

AA-A35/L PRE AMP
SCHEMATIC DIAGRAM

NO. 7-5 840607A (A2) 4C

001530



A
B
C
D
1
2
LEFT
RIGHT
CD
PHONO
J1
C901
IC1 M5218
IC2 TC9164N
IC3 M5218
IC4 TC9176P
IC5 TC9156P
IC6 TC9156P
T103
TO PIN JACK PCB T102
RCH
LCH
T102
TO PIN JACK PCB T101
TO PIN JACK PCB ①
TO MAIN AMP PCB J3
J4
J2
J3
CK D S
T105
L G R
TO MPX PCB J1
-15
+15
R27
R28
C24
A1007B503A
AKAI
TO MAINAMP PCB
TO CONTROL (A) PCB T110
TO CONTROL (A) PCB T109

PRE AMP PCB A1007B503A

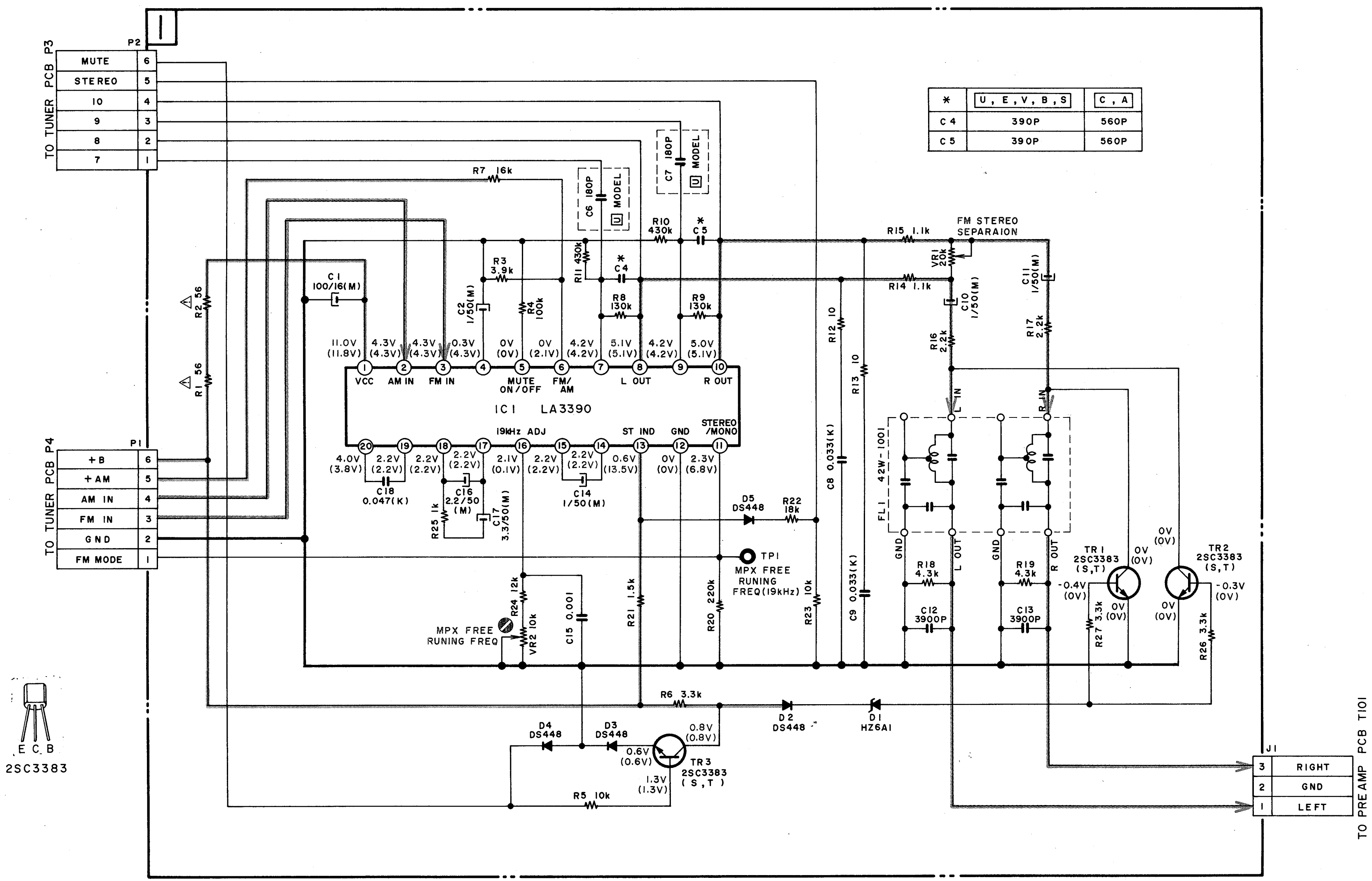
VL1, 1b, 2, 2b
VC1, 1b, 2, 2b } Ⓥ model only

LOCATION OF COMPONENTS

IC		TERMINAL	
IC1	A1	T103	B1
IC2	B1	T104,105	B2
IC3,4	C1	J2	B2
IC5,6	D1	J3	D2
		J4	C2
		①②	B2

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT


TO TUNER PCB P3
P2
MUTE 6
STEREO 5
10 4
9 3
8 2
7 1
TO TUNER PCB P4
P1
+B 6
+AM 5
AM IN 4
FM IN 3
GND 2
FM MODE 1
R1 56
R2 56
C1 100/16(M)
C2 1/50(M)
R3 3.9k
R4 100k
R7 16k
C6 180P U MODEL
C7 180P U MODEL
R10 430k
R11 430k
C4 *
C5 *
R8 130k
R9 130k
IC1 LA3390
VCC
AM IN
FM IN
MUTE ON/OFF
FM/AM
L OUT
R OUT
19kHz ADJ
ST IND
GND
STEREO /MONO
11.0V (11.8V)
4.3V (4.3V)
0.3V (4.3V)
0V (0V)
0V (2.1V)
4.2V (4.2V)
5.1V (5.1V)
5.0V (5.1V)
4.0V (3.8V)
2.2V (2.2V)
2.1V (0.1V)
0.6V (13.5V)
2.3V (6.8V)
C18 0.047(K)
C16 2.2/50 (M)
C17 3.3/50(M)
C14 1/50(M)
R25 1k
R24 12k
VR2 10k
MPX FREE RUNING FREQ
C15 0.001
R21 1.5k
R20 220k
D5 DS448
R22 18k
TP1 MPX FREE RUNING FREQ(19kHz)
R23 10k
C8 0.033(K)
C9 0.033(K)
R12 10
R13 10
R15 1.1k
R14 1.1k
VR1 20k
FM STEREO SEPARAION
C10 1/50(M)
C11 1/50(M)
R16 2.2k
R17 2.2k
FL1 42W-1001
L IN
R IN
GND
L OUT
R OUT
R18 4.3k
R19 4.3k
C12 3900P
C13 3900P
TR1 2SC3383 (S,T)
TR2 2SC3383 (S,T)
-0.4V (0V)
-0.3V (0V)
R27 3.3k
R26 3.3k
R6 3.3k
D2 DS448
D1 HZ6A1
D4 DS448
D3 DS448
TR3 2SC3383 (S,T)
0.8V (0.8V)
0.6V (0.6V)
1.3V (1.3V)
R5 10k
J1
3 RIGHT
2 GND
1 LEFT
TO PREAMP PCB T101
E C B
2SC3383

*	U, E, V, B, S	C, A
C4	390P	560P
C5	390P	560P

MPX PCB A1007B507B

VOLTAGES ARE INDICATED AT FM MODE (98MHz, 1kHz, 75kHz DEV, 60dB TUNED)
AND INDICATED IN ( ) AT AM MODE (999kHz, 1kHz, 30%, 74dB TUNED)

+B(POWER SUPPLY) LINE

SIGNAL LINE

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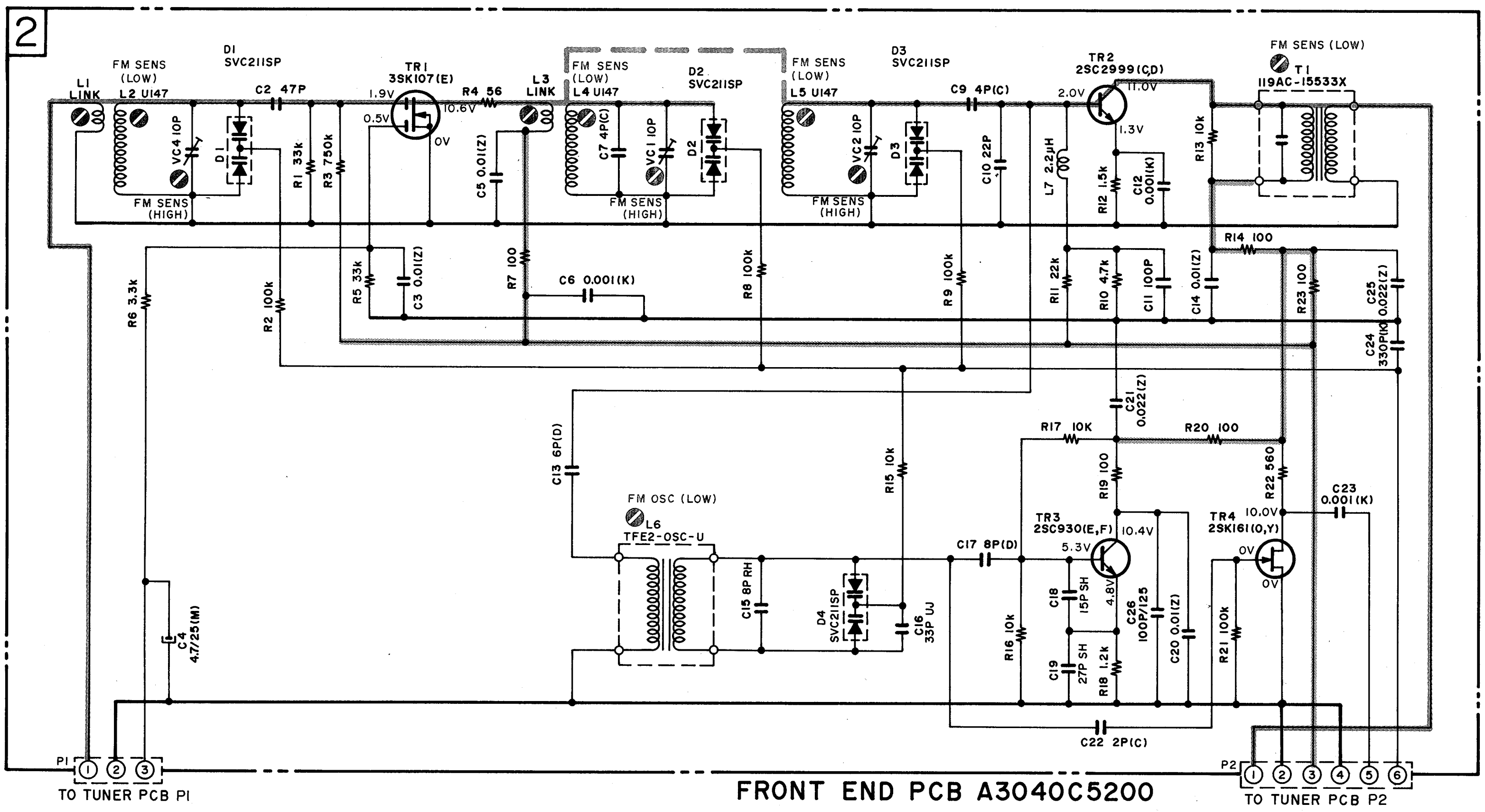
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV(J)

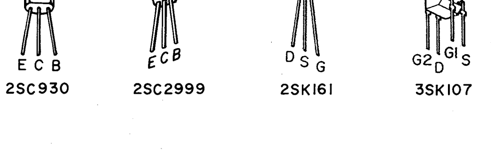
AA-A35/L MPX SCHEMATIC DIAGRAM

NO. 7-6 840608A (A3) 4C


2
L1 LINK
FM SENS (LOW) L2 U147
FM SENS (HIGH)
VC4 10P
D1 SVC211SP
C2 47P
R1 33k
R3 750k
TR1 3SK107(E)
1.9V
0.5V
10.6V
0V
R4 56
L3 LINK
C5 0.01(Z)
FM SENS (LOW) L4 U147
C7 4P(C)
VC1 10P
D2 SVC211SP
FM SENS (LOW) L5 U147
VC2 10P
D3 SVC211SP
C9 4P(C)
C10 22P
L7 2.2μH
TR2 2SC2999(C,D)
2.0V
11.0V
1.3V
R12 1.5k
C12 0.001(K)
R13 10k
FM SENS (LOW)
T1 119AC-15533X
R14 100
R6 3.3k
R2 100k
R5 33k
C3 0.01(Z)
R7 100
C6 0.001(K)
R8 100k
R9 100k
R11 22k
R10 4.7k
C11 100P
C14 0.01(Z)
R23 100
C25 0.022(Z)
C24 330P
C21 0.022(Z)
C13 6P(D)
R15 10k
FM OSC (LOW)
L6 TFE2-OSC-U
C15 8P RH
D4 SVC211SP
C16 33P UJ
C4 4.7/25(M)
R17 10K
R20 100
R19 100
TR3 2SC930(E,F)
5.3V
4.8V
10.4V
C17 8P(D)
C18 15P SH
C19 27P SH
R16 10k
R18 1.2k
C26 100P/125
C20 0.01(Z)
R22 560
TR4 2SK161(O,Y)
10.0V
0V
C23 0.001(K)
R21 100k
C22 2P(C)
P1 1 2 3
TO TUNER PCB P1
P2 1 2 3 4 5 6
TO TUNER PCB P2

FRONT END PCB A3040C5200

VOLTAGES ARE INDICATED AT FM MODE
(98MHz, 1kHz, 75kHz DEV, 60dB TUNED)

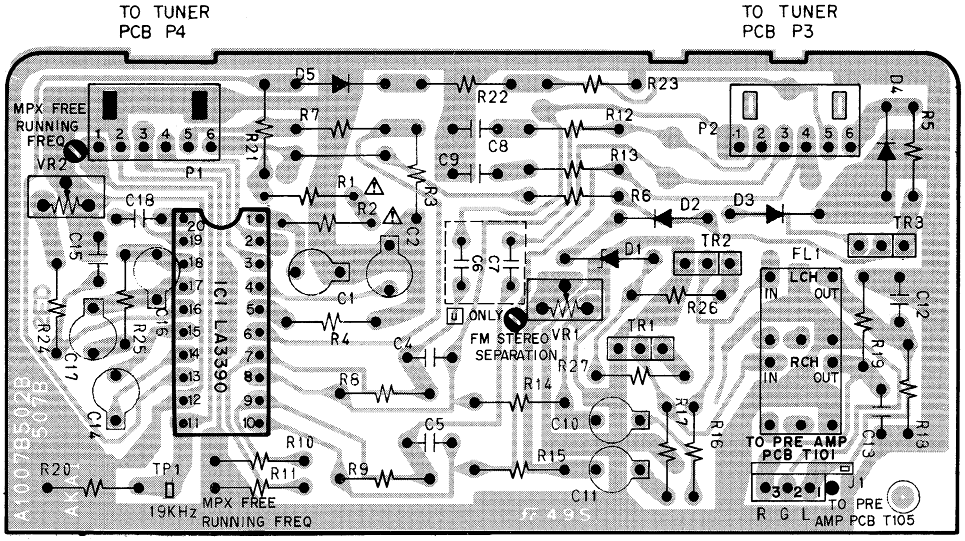

E C B
2SC930
E C B
2SC2999
D S G
2SK161
G2 D G1 S
3SK107

:+B(POWER SUPPLY) LINE
:FM SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

AA-A35/L FRONT END SCHEMATIC DIAGRAM

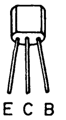
NO.7-7 840224B (A3) 4C


TO TUNER PCB P4
TO TUNER PCB P3
MPX FREE RUNNING FREQ
VR2
P1
1 2 3 4 5 6
D5
R7
R21
R22
R23
R12
R13
R6
P2
D4
R5
C18
C15
R1 ⚠
R2 ⚠
R3
C2
C9
C8
C1
IC1 LA3390
C6
C7
U ONLY
D1
D2
D3
TR2
TR3
FL1
LCH
IN OUT
RCH
IN OUT
C12
R19
R18
C13
R24
R25
C16
C17
C14
R4
C4
FM STEREO SEPARATION
VR1
R26
TR1
R27
R14
R17
R16
R8
C5
C10
R10
R11
R9
R15
C11
R20
TP1
19KHz
MPX FREE RUNNING FREQ
TO PRE AMP PCB T101
J1
R G L
TO PRE AMP PCB T105
A1007B502B 507B
AKAI

MPX PCB
A1007B502B U C A E V S
A1007B507B B E (AA-A35L)

TR1,2,3 --- 2SC3383(S,T)

[• • •] = NPN
B



2SC3383(S.T)

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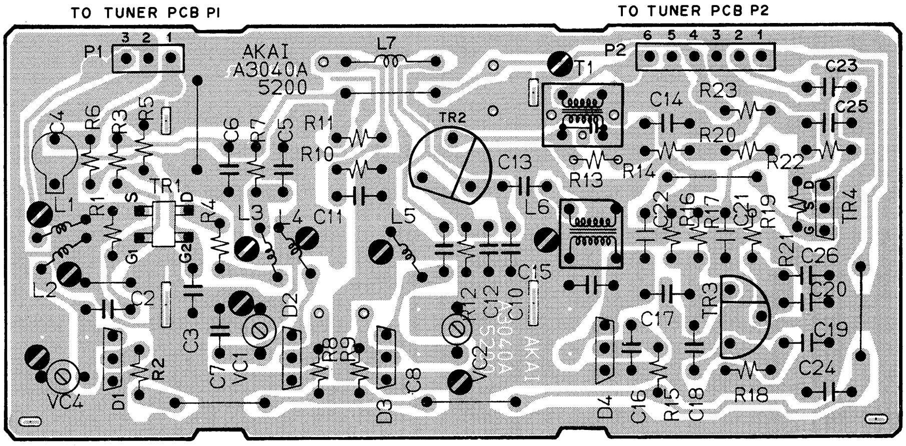
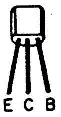
ADJUSTMENT POINT	
L1 to 5	FM SENS (LOW)
VC1,2,4	FM SENS (HIGH)
L6	FM OSC (LOW)
T1	○FM SENS (LOW) ○FM STEREO DISTORTION

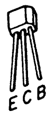

TO TUNER PCB P1
TO TUNER PCB P2
P1
3 2 1
AKAI A3040A 5200
L7
T1
P2
6 5 4 3 2 1
C23
C25
C14
R23
R20
R22
C4
R6
R3
R5
C6
R7
C5
R11
R10
TR2
C13
R13
R14
TR1
L1
R1
S
D
G1
G2
R4
L3
L4
C11
L5
L6
C22
R16
R17
C21
R19
TR4
R21
C26
C20
L2
C2
C3
VC1
C7
D2
R8
R9
C8
D3
C9
C12
C10
C15
R12
VC2
C17
TR3
C19
C24
R18
D4
C16
R15
C18
D1
R2
VC4

FRONT END PCB A3040C 5200

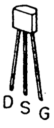
TR1-------3SK107(E)
TR2------2SC2999(C,D)
TR3-------2SC930(E,F)
TR4------2SK161(O,Y)



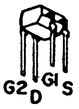
2SC930



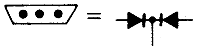
2SC2999



2SK161



3SK107

D1 to D4


AKAI

WERKSTATTHANDBUCH

Da dieses Wartungshandbuch bereits auf Englisch veröffentlicht ist und Einstell- und Zeichnungshinweise auf Deutsch enthält, empfiehlt es sich, diese Ausgabe des Handbuchs zusammen mit der bereits veröffentlichten englischen Ausgabe und den Stromlaufplänen zu verwenden.

COMPUTERGESTEUERTER STEREO RECEIVER

MODEL AA-A35/L

I. TECHNISCHE DATEN

UKW-TUNER-TEIL

Abstimmfrequenzbereich	87,5MHz bis 108,0MHz
Nutzempfindlichkeit (IHF)	11,2dBf (300 Ohm)
Geräuschberuhigung (IHF) (S/N=50dB)	16,2dBf (Mono)/37,2dBf (Stereo)
Gleichwellenselektion	1,5dB
Selektivität (IHF)	60dB (400kHz)
Spiegelselektion	85dB
ZF-Unterdrückung	90dB
Nebenwellenunterdrückung	90dB
AM-Unterdrückung	60dB
Geräuschspannungsabstand (IHF)	75dB (Mono) 65dB (Stereo)
Klirrfaktor	0,1% (Mono)/0,3% (Stereo)
Stereotreotrennung	45dB (1kHz)

LW-TUNER-TEIL (NUR AA-A35L)

Abstimmfrequenzbereich	146kHz bis 353kHz
Nutzempfindlichkeit (IHF)	800µV/m
Selektivität (IHF)	30dB
Siegelselektion	45dB
ZF-Unterdrückung	55dB
Geräusch/spannnungsabstand	35dB
Klirrfaktor	2.0%
Antenne	Rahmenantenne

AM-TUNER-TEIL (MW FÜR AA-A35L).

Abstimmfrequenzbereich	530kHz bis 1610kHz für USA und Kanada 531kHz bis 1602kHz für andere Länder
Nutzempfindlichkeit (IHF)	300µV/m
Selektivität (IHF)	25dB
Siegelselektion	40dB
AF-Unterdrückung	55dB
Geräusch/spannungsabstand	40dB
Klirrfaktor	1,0%
Antenne	Rahmenantenne

VERSTÄRKERTEIL

Sinusleistung	8 Ohm
20Hz bis 20kHz	45W x 2/0,02%
1kHz	53W x 2/0,02%
Musikleistung	100W
Leistungsbandbreite (IHF, -3dB, 8 Ohm)	5Hz bis 70kHz/0,1%
Geräuschspannungsabstand	
Phono	75dB
Aux	98dB
Eigenrauschen (8 Ohm)	0,5mV
Kanaltrennung (IHF)	
PHONO/AUX	65dB (1kHz)
Dämpfungsfaktor (1kHz, 8 Ohm)	50
Ausgang	
Lautsprecher	A oder B 4 bis 16 Ohm A + B 8 bis 16 Ohm
Eingangsempfindlichkeit/Impedanz	
Phono	2,5mV/100 KOhm
Aux/Tape	150mV/47 KOhm
Ausgangspegel/Impedanz	
Tape Rec	50mV/3 KOhm
Frequenzgang	
Phono (RIAA)	±0,5dB (30Hz bis 15kHz)
Aux/Tape	5Hz bis 100kHz, -3dB
Klangregelung	
Basse	±8dB (100Hz)
Höhen	±8dB (10kHz)
Filter	
Rumpel	-3dB/18Hz
Phono max. Eingangspegel (MM)	150mV
Leistungsaufnahme	120V, 60Hz für USA und Kanada 220V, 50Hz für Europa außer GB 240V, 50Hz für GB und Australien 110V/120V/220V/240V, 50/50Hz umschaltbar für andere Länder
Abmessungen	440(B) x 110(H) x 345(T) mm
Gewicht	8,4kg

* Änderungen von technischen Daten und Design zwecks Verbesserung vorbehalten.

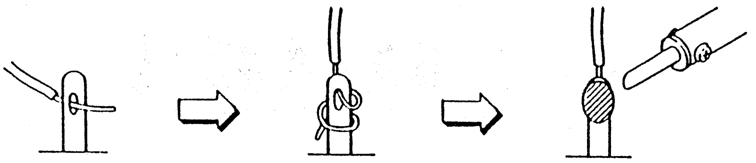
II. SICHERHEITSANWEISUNG

SICHERHEITSPRÜFUNG NACH DER REPARATUR

Überprüfen Sie, ob der Isolationswidersatand zwischen den Stiften des Netzsteckers sowie allen äußeren Teilen des Gerätes über 10 MOhm liegt. Bei Geräten mit Anschluß von Außenantenne (Tuner, Empfänger usw.), welche für [C] oder [Å] bestimmt sind, muß der Isolationswiderstand über 2,2 MOhom liegen (Masse-Anschlüsse, Mikrofonbuchsen, Kopfhörerbuchsen, line-in/out-Buchsenusw.)

VORSICHTSMASSNAHMEN BEI DER REPARATUR

1. Die mit dem⚠Symbol bezeichneten Teile sind ausschlaggebend für die Betriebssicherheit. Diese Teile nur gegen Original Ersatzteile austauschen.
2. Zusätzlich werden andere Teile entsprechend den Gesetzen zur Funkentstörung verwendet. Diese dürfen nur gegen die vorgeschriebenen Bauteile ausgetauscht werden.
   Beispiele: HF-Wandler, Tuner-Komponenten, Antennen-Wahlschalter, HF-Kabel, Entstörkondensatoren, Entstörfilter usw.
3. Nur die vorgeschriebene interne Verdrahtung verwenden. Hierbei besonders beachten:
   1) Mit PVC-Umhüllung versehene Leitungen.
   2) Doppelt isolierte Leitungen.
   3) Hochspannungsleitungen
4. Für gefährliche, stromführende Teile die vorgeschriebenen Isoliermaterialien verwenden. Hierbei besonders beachten:
   1) Isolierband
   2) PVC-Umhüllung
   3) Abstandshalter
   4) Isolierscheiben für Transistoren
   5) Plastikschrauben zum Anbringen von Mikroschaltern (speziell bei Plattenspielern)
5. Beim Austausch von Bauteilen auf der Primärseite (Transformatoren, Netzkabel, Entstör Kondensatoren usw.) Sind die Leitungsenden vor dem Löten fest zu umwickeln.

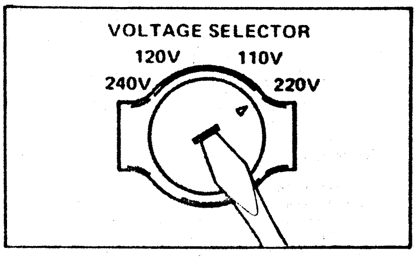


6. Es ist darauf zu achten, daß Leitungen nicht in Kontakt mit Wärme erzeugenden Teilen kommen (Kühlkörper, Oxidmetallschichtwiderstände, Sicherungswiderstände usw.
7. Überprüfen, dass die ausgetauschten Leitungen nicht in Kontakt mit scharfen Kanten oder spitzen Teilen kommen.
8. Desgl. sind die Bereiche in der Umgebung von Stellen, an denen repariert wurde, zu überprüfen.
9. Darauf achten, daß keine Fremdkörper (Schrauben, Lot, usw.) im Gerät verbleiben.

III. GERÄT VERBLEIBEN

3-1 WAHL DER SPANNUNG

Die Geräte für Kanada, USA Europa, GB und Australien sind nicht mit dieser Funktion ausgestattet. Jedes Gerät ist ab Werk dem Bestimmungsland entsprechend eingestellt; einige Geräte können jedoch nach Bedarf auf 110V, 120V, 220V oder 240V eingestellt werden. Im Falle, daß die Spannung des Gerätes einstellbar ist:
Vor dem Anschluß des Netzkabels dem an der Rückseite befindlichen Spannungswähler (VOLTAGE SELECTOR) mit einem Schraubenzieher drehen, so daß korrekte Spannung angezeigt wird.



V. SCHALTUNGSERKLÄRUNG

5-1 VERSTÄRKERFUNKTIONEN

5-1-1 ALLGEMEINE BESCHREIBUNG

(1) Funktionen

a) Eingangswahl-Steuerung
Dieser Mikrocomputer hat die Fähigkeit, den Analogschalter TC 9164 N zu steuern, der als Eingangswähler dient. Drei Eingangssignale PHONO, CD und TUNER und zwei Mithörkontrollsysteme sowie TAPE 1 and TAPE 2 können geschaltet werden.

b) Direktwahl-Lautstärkeregler
Die von Klang/Lautstärke-Tipptasten abgegebenen Spannungswerte gelangen auf einen Analog/Digital-Umsetzer und den Daten entsprechend wird das elektronische Potentiometer gesteuert. Mit diesem Verfahren wird eine bestimmte Einstellung durch Ein- oder Ausblenden von der früheren potentiometerposition erreicht.

c) Balanceregler
Durch Einstellung verschiedener Pegeldifferenzen zwischen linkem Kanal und rechtem Kanal mit dem Hauptregler können max. 30dB L-R Pegelunterschiede geschaffen werden.

d) Klangregler (BASS/TREBLE)
Das Klangregel-Potentiometer (TC 9156P) wird in 2dB Schritten bis zu einem Maximum von ±10dB betrieben, dadurch wird eine elektronische Klangregelung erzielt.

e) Klangbild-Speicherung
Mit dieser Funktion werden im Mikrocomputer zwei Klangbilder der Klangregel-Einstellungen gespeichert, von denen eines jederzeit abgerufen werden kann.

f) Lautstärkeregelungs-Sicherheitsfunktion
Bei dem Tipptasten-betriebenen Direktwahl-Lautstärke-System,das die unmittelbare Einstellung jedes gewünschten Lautstärkepegels ermöglicht, besteht die Gefahr, daß durch unbeabsichtigte Berührung einer höheren Position des Reglers plötzlich eine unerwartete höhere Lautstärke auf die Lautsprecher gegeben wird. Eine Zeitverzögerungs-funktion in Form von einer Einblend-Automatik ist als Gegenmaßnahme für die oben erwähnte Möglichkeit vorgesehen. Zusätzlich ist diese Sicherheitsfunktion vorgesehen, um zu vermeiden, daß von vornherein ein bestimmter Pegel überschritten werdne kann.

g) TUNER Direktfunktion
Diese Funktion stellt den Eingangschalter auf TUNER, sobald Daten vom Mikrocomputer (A1007T) empfangen werden. Die Ausgabe der Daten erfolgt nach Betätigung der Tuner-Taste.

5-1-2 TASTENEINGABE UND DYNAMISCHE FL-ANZEIGE-EINTASTUNG

Tasteneingabe und dynamische FL-Anzeige-Eintastung Tastenfeldabfrage und FL-Anzeige erfolgen dynamisch. Die grundlegenden Taktsignale werden durch ITMR interrupt (1024Hz) für die Ausgabe von Strobe-Signalen erzeugt.

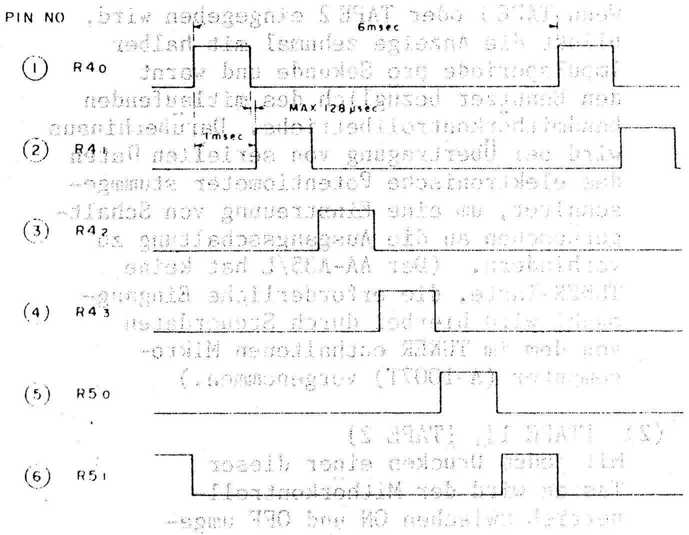


Abb. 5-1

5-1-3 ANNAHME (AKZEPTANZ) EINER TASTENEINGABE

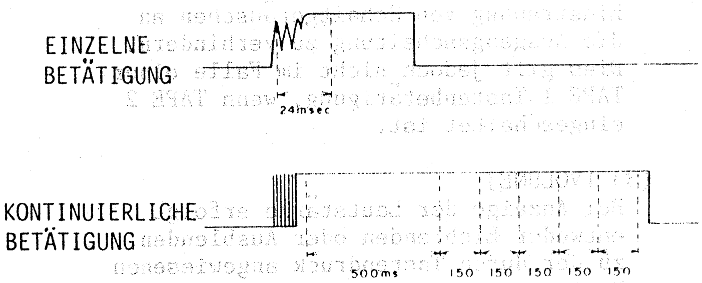


Abb. 5-2

- Tastenprellen wird 24 msec lang unterdrückt.
- Kontinuierliches Drücken wird erstmals 24 msec nach Tastenbetätigung akzeptiert, zum zweiten Mal 500 msec nach der ersten Betätigung und daraufhin im Abstand von je 150 msec.
- Gleichzeitiges Drücken mehrerer Tasten wird grundsätzlich verhindert. Falls eine solche Betätigung ausgeführt wird, werden solange keine Tasteneingaben akzeptiert bis alle (gleichzeitig) gedruckten Tasten gelöst wurden.

5-1-4 TASTENABFREGE

(1) [PHONO], [CD]
Wird der Engangswähler (TC9164N) fün eine eingegebene Eingangs-Betriebsart eingestellt, erfolgt daraufhin entsprechende Anzeige. Befindet sich das Gerät bereits in der gewählten Betriebsart, geschieht jedoch nichts. Wenn TAPE 1 oder TAPE 2 eingegeben wird, blinkt die Anzeige zehnmal mit halber Impulsperiode pro Sekunde und warnt den Benutzer bezüglich des mitlaufenden Bandmithörkontrollbetriebs. Darüberhinaus wird bei Übertragung von seriellen Daten das elektronische Potentiometer stummgeschaltet, um eine Einstreuung von Schaltgeräuschen an die Ausgangsschaltung zu verhindern. (Der AA-A35/L hat keine TUNER-Taste, die erforderliche Eingangswahl wird hierbei durch Steuerdaten von dem im TUNER enthaltenen Mikrocomputer (A-1007T) vorgenommen.)

(2) [TAPE 1], [TAPE 2]
Mit jedem Drücken einer dieser Tasten wird der Mithörkontrollbetrieb zwischen ON und OFF umgeschaltet, die Anzeige wird ebenfalls zwischen ON und OFF entsprechend umgeschaltet. Darüberhinaus wird während der Übertragung von seriellen Daten an den Analogschalter das elektronische Potentiometer stummgeschaltet, um eine Einstreuung von Schaltgeräuschen an die Ausgangsschaltung zu verhindern. Dies gilt jedoch nicht im Falle einer TAPE 1 Tastenbetätigung, wenn TAPE 2 eingeschaltet ist.

(3) [VOLUME]
Bei Anzeige der Lautstärke erfolgt entweder Einblenden oder Ausblenden zu der durch Tastendruck angewiesenen Position vom unmittelbar vorangehenden Pegel. Die Schrittgeschwindigkeit beträgt 2dB pro 60msec. Erfolgt jedoch ein Tastendruck oberhalb der "Safety"-Posituin, wird die Funktion nur bis zur "Safety"-Position ausgeführt.
Die Anzeige selbst wird der durch Tastendruck angewiesenen Position entsprechend (innerhalb des "Safety"-Bereiches) umgeschaltet.
Bei Anzeige des Balance-oder Safety-Pegels erfolgt die Umschaltung der Anzeige auf Lautstärke. Abgesehen davon, entspreicht der Betrieb dem oben beschriebenen Verfahren.

(4) [BALANCE L], [BALANCE R]
Bei Anzeige der Balance werden die Daten zur Angabe der vorgeschriebenen Pegelabweichung zwischen dem linken und dem rechten Kanal des elektronischen Potentiometers übertragen, dementsprechend erfolgt auch die Anzeige.
Bei kontinuierlicher Tastenbetätigung beginnt die Potentiometer-einstellung mit einer Verzögerung von 500 msec nach dem Drücken und die Veränderung erfolgt faraufhin mit 2dB pro 150 msec. Sie verweilt dann 750 msec in der Mittelposition, wenn diese durchlaufen wird. (Die Anzeige verändert sich in unmittelbarer Nähe der Mittel-Position mit 2dB pro Schritt, in allen anderen Bereichen jedoch mit 4dB.
Wenn diese Tasten gedrückt werden, während der Lautstärk- oder der Sicherheitspegel angezeigt wird, erfolgt Umschaltung auf Balance.

(5) [SAFETY]

- Bei Anzeige der Lautstärke- oder der Balance-Position:
Durch einmaliges Drücken der Taste wird zunächst die zur Zeit gültige Safety-Pegelposition anzeigt. Diese Anzeige wird 5 sek. später auf Lautstärkeposition umgeschaltet. Bleibt die Safety-Taste jedoch kontinuierlich eine Sekunde oder länger gedrückt, erfolgt Umschaltung auf Anzeige der Lautstärke und die Safety-Anzeige blinkt mit halber Impulsperiode im Abstand von je einer Sekunde. Dies signalisiert, daß die Betriebsart zur Veränderung des Safety-Pegels eingeschaltet ist, wobei jeder beliebige Lautstärkepegel bis zum Maximum gewählt werden kann; dieser Betrieb wird eine Minute lang beibehalten. Mit anderen Worten, vom Beginn des Blinkens der Anzeige kann 1 Minute lang der Safety-Pegel eingestellt werden.
- Wenn die Safety-Anzeige blinkt:
Die in dieser zeitspanne durch Tastendruck angewiesene Lautstärke-Position wird als Safety-Pegel vorgegeben; dies ist der Lautstärkepegel, der durch die effektiv ausgegebene Lautstärke nicht überschritten wird. Wenn als Safety-Pegel nicht die Maximumposition des Potentiomters vorgegeben wird, leuchtet die safety-Anzeige ständig auf, nur in der Maximum-Position erlischt die Anzeige.

(6) [BASS+], [BASS-], [TREBLE+], [TREBLE-]
Mit jedem Drücken einer dieser Taste wird das elektronische Potentiometer für BASS oder TREBLE auf ein höheren bzw. einen niedrigeren Wert eingestellt. Wenn man die Taste kontinuierlich gedrückt hält, wird der erste Potentiometer-Zu/Abnahme- Umschaltbetrieb 500 msec nach Drücken der Taste ausgeführt. Der nachfolgende Betrieb findet dann im 150 msec-Schritten statt. Wird bei diesem Umschaltbetrieb (Gleitbetrieb) die Mittelposition durchlaufen, verweilt das System in dieser Position 750 msec lang, bevor es weitergeht.

Auch die Anzeige verändert sich den einzelnen Tastenbetätigungen entsprechend.

(7) [DEFAET]
Die BASS/TREBLE-Positionen werden ungeachtet der bisherigen Potentiometer-Positionen alle in Mittelstellung gebracht.

(8) [MEMO]
Schaltet die Klangbild-Specher-Bereitschaft ein. Zu diesem Zeitpunkt leuchtet die ACOUSTIC MEMO-Anzeige auf und die Anzeigen A1 und A2 blinken zenmal nit halber Impulsperiode in 1-Sekunden-zyklen (bei 1Hz).
Der Bereitschaftsbetrieb kann auch durch Drücken einer beliebigen anderen Taste als A1 und A2 beendet werden, bevor die 5 Sekunden verstrichen sind.

(9) [A1], [A2]

- In der Bereitschafts-Betriebsart für Klangbild-Speicherung:
  Die gegenwärtigen BASS/TREBLE-Positionen werden gespeichert und der Speicher-Bereitschaft-Betriebs aufgehoben.
- In allen anderen Betriebsarten als Klangbild-Speicher-Bereitschaft:
  Die gespeicherten BASS/TREBLE-Positionen werden geladen, d.h. die Potentiometer werden unmittelbar auf diese Positionen eingestellt und die Anzeige entsprechend verändert.

5-1-5 EINGANGSWAHL -ANALOG-SCHALTER (TC9164N)

(1) Struktur der seriellen Daten
Die seriellen Daten bestehen aus 3 Bit parallel, einschließlich DATA, CK, und ST und die Anzahl der seriellen Bits für die einzelnen Potentiometer wurden wie folgt eingerichtet.

TC9164N E → 14 Bits
TC9176P → 20 Bits
TC9156P → 18 Bits

Die Steuerleitungen DATA und CK für TC9176P und TC9156P wurden mit den Steuerleitungen ST-WR und CE für den A/D-Umsetzer LC7910 vereinheitlicht, da die A/D-Umsetzung und die Datenübertragung zu den Potentiometern niemals gleichzeiteg erfolgt und keine Veränderungen im Status der Potentiometer Stattfinden, solange keine ST ausgegeben werden.

[Schematische Zeichnung zur Date-Zeitsteuerung]

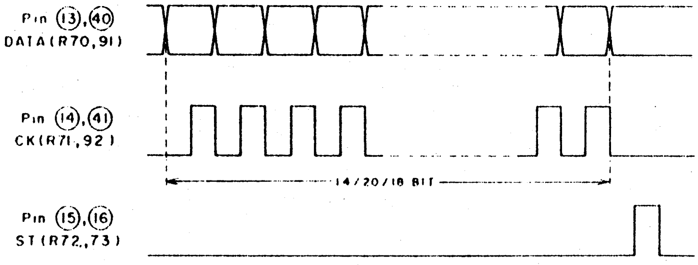


Abb. 5-3

(2) Datenpuffer
Die Datanpuffer für den TC9146N werden in den RAMs MFSRD0 bis MFSRD3 gebildet und für den TC9176P und den TC9156P in den RAMs MVSRD0 bis MVSRD4. Die zuweisungstabellen sind in den Tabellen 5-1 bis 5-3 dargestellt.

a) Puffer für den Eingangswähler- Schalter (TC9164N)

MFSRD3				MFSRD2				MFSRD1				MFSRD0				
Unused	PHONO	CD	TUNER	SOURCE 1	TAPE1 PB	SOURCE 2	TAPE2 PB			L	R	C_1	C_2	C_3	C_4	
0				0	1	1	0			1	1	0	1	0	0	⟶ Feste Daten

ON OFF

Tabelle 5-1

Die Bits 2 und 3 von MFSRD1 werden nicht übertragen.

b) Die Puffer für Master-Potentiometer (TC9176P)

MVSRD4				MVSRD3				MVSRD2				MVSRD1				MVSRD0				
L	R		0	2	4	6	8	0	10	20	30	40	50	60	70	C_1	C_2	C_3	C_4	
		0														0	0	0	1	⟶ Feste Daten

Tabelle 5-2

c) Die Puffer für das Klang-Potentiometer (TC9156P)

MVSRD4				MVSRD3				MVSRD2				MVSRD1				MVSRD0				
+5	+4	+3	+2	+1		0		1	−2	−3	−4			−5	L	R	C_1	C_2	C_3	
					0		0								1	1	0	1	0	⟶ Für BASS
					0		0								1	1	1	0	0	⟶ Für TREBLE

Tabelle 5-3

5-2 TUNER-BETRIEB

5-2-1 ALLGEMEINE BESCHREIBUNG

(1) Funktionen

a) Wahlfreie Voreinstellung 20 bzw. 16 Sendern. Bei der Initialisierung besteht ein Unterschied zwischen dem A45 und dem A35/25; gegenüber dem A45 wird die Vorgabe von je 10 vorderen (1 bis 10) und hinteren (11 bis 20) bzw. insgesamt 20 Sendern ermöglicht, wohingegen beim A35/25 8 Sender jeweils vorn (1 bis 8) und hinten (9 bis 16) d.h. insgesamt 16 Sender voreingestellt werden können. Die Voreinstellung gestattet die Speicherung von Sendern mit direktem Zugriff ungeachtet des Frequenzbandes, für UKW-Sender wird auch die MONO/STEREO-Funktion gespeichert.

b) Zwei Abstimmarten AUTO und MANUAL AUTO-Scan Tuning, durch Drücken der UP/DOWN-Taste erfolgt Sendersuchlauf bis ein Sender gefunden wird; nach dem Auffinden stoppt der Suchlaufbetrieb. MANUAL-Tuning, der Sendersuchlauf erfolgt nur solange die Taste gedrückt wird, beim Loslassen wird der Sendersuchlauf gestoppt. Dies sind die zwei möglichen Abstimmarten.
Die LW-Abstimmung erfolgt in 1kHz-Schritten für MANUAL und 9kHz-Schritten für AUTO.

c) Umschaltung des Empfangs-Betriebes für MONO und STEREO. Für UKW-Empfang ist eine MONO/STEREO-Betriebsarten-Umschaltung vorgesehen, diese ist auch in den Sender-Vorabstimm-Daten enthalten.

5-2-2 TASTENEINGABE-AKZEPTANZ

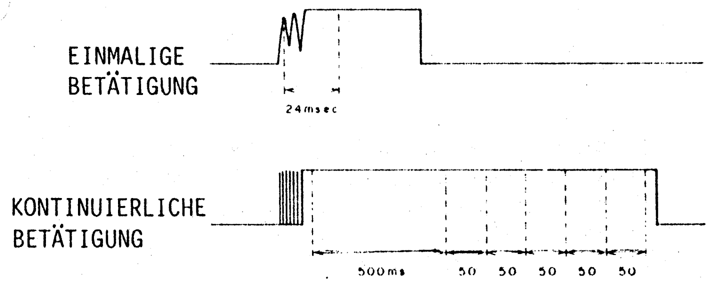


Abb. 5-4

- Tastenprellen wird 24 msec lang unterdrückt.
- Kontinuierliche Betätigung wird zuerst 24 msec nach dem Start akzeptiert, die zweite, 500 msec nach dem ersten und daraufhin in Abständen von je 50 msec.
- Gleichzeitiges Drücken mehrerer Tasten/ wird grundsätzlich verhindert. Sobald eine derartige Tastenbetätigung vorgenommen wird, erfolgt keine Tastenfeld-Abfrage bis alle gedrückten Tasten losgelassen sind.

5-2-3 INITIALEINSTELLUNG (RST-Betriebsart)

a) FL-Anzeige:

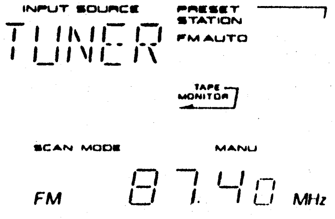


Abb. 5-5

b) Die empfangene Frequenz ist im UKW-Band am untersten Ende für jede Bestimmung:
c) Die Betriebsart ist STEREO (FM AUTO).
d) Der Sendersuchlauf-Betrieb ist MANUAL.
e) Allen vorabgestimmten Kanälen ist die niedrigste UKW-Frequenz zugewiesen.
f) Die letzten Frequenzen einzelner Frequenzbänder des Tuners sind die niegrigsten Frequenzen.

5-2-4 ZUSTAND IM SPEICHERSCHUTZ

Grundsätzlich bleibt jeder Zustand wie unmittelbar vor dem Speicherschutz Betrieb erhalten, wie nachstehend aufgeführt sind jedoch kleine Abweichungen möglich.

a) Wird ein Speicherschutz-Betrieb während AUTO SCAN aktiviert, stoppt der Abstimmbetrieb.
b) Wenn ein Speicherschutz-Betrieb in einer Speicher-Bereitschafts- Betriebsart aktiviert wird, hebt sich der Bereitschafts-Betrieb auf.
c) Der Zustand vor dem Speicherschutz bleibt ca. 3 Wochen lang erhalten.

5-2-5 ACTIVE UND NON-ACTIVE-BETRIEBSARTEN DES TUNERS

(1) Active-Betrieb

Dies ist die Betriebsart, nachdem die Daten an den Mikrocomputer (A1007A) des Verstärkers übertragen wurden, so daß der Eingangswähler des Verstärkers auf TUNER umgeschaltet wird, d.h. die Funktion in der der gesamte Tunerbet aktiviert wurde.
Durch Drücken der Tasten BAND, UP/DOWN und der Vorabstimm-Kanal-Tasten werden die Daten für den Mikrocomputer des Verstärkers vom Port R41 (A1007) Pin 2 übertragen; die Zeitsteuerung entspricht der nachstehenden Darstellung.

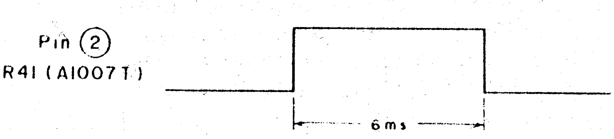


Abb. 5-6

(2) Non Aktive Betrieb

Es handelt sich hierbei um eine Betriebsart, in der die Tunerfunktion teilweise eingeschränkt wird. Durch einen[H] Pegel, welcher vom Verstärker-Mikrocomputer zum Mikrocomputer (A1007 T Pin 15) gelangt, weil der Eingangswahlschalter auf eine andere Quelle als Tuner (z.B. Phono) geschaltet wurde, wird dieser Betriebszustand erreicht.

Zur Kennzeichnung der Non-Active-Betriebsart erlischt die Frequenzanzeige und es werden stattdessen Balken angezeigt.

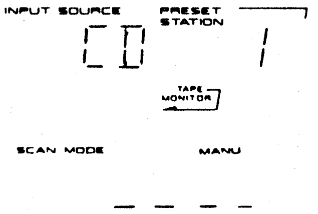

INPUT SOURCE
PRESET STATION
CD
1
TAPE MONITOR
SCAN MODE
MANU
— — — —

Abb. 5-7

Es werden nur die Betätigungen der Tasten BAND, UP/DOWN und die Vorabstimm-Kanal-Tasten akzeptiert, alle anderen Tasten werden ignoriert.

5-2-6 AUTO -TUNING

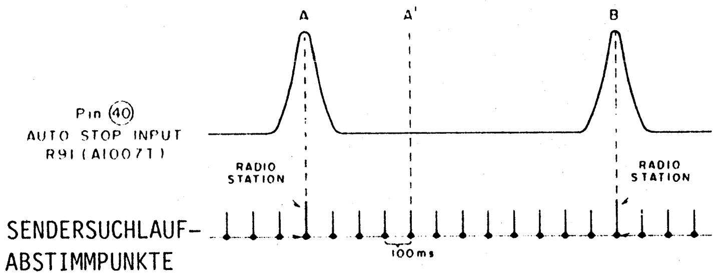

A
A'
B
Pin ㊵
AUTO STOP INPUT
R91 (A1007T)
RADIO STATION
RADIO STATION
SENDERSUCHLAUF-ABSTIMMPUNKTE
100ms

Abb. 5-8

Der Startpunkt im Auto-Tuning-Betrieb kann entweder der Senderempfangspunkt sein oder eine Stelle, an dem kein Sender empfangen wird.

Da der Suchlauf nur an [H]-Pegeln des AUTO STOP Signals anhält können daher Unregelmäßigkeiten verursacht werden; das zur Anwendung kommende Verfahren besteht darin, den Suchlauf nur zu stoppen, wenn das AUTO STOP Signal nach dem Suchlaufstart zunächst auf einen[L]-Pegel abgefallen und dann auf einen[H]-Pegel gewechselt ist.

Die Suchlaufgeschwindigkeit beträgt ca. 100 msec pro Schritt. Der Schritt ist ein 1-Kanal-Abstand im empfangenem Band, der je nach Bestimmung variiert. Der automatische Sendersuchlauf von LW ist jedoch eine Ausnahme in dieser Regel, ihm sind 9kHz-Schritte zugewiesen, wobei feste Punkte 9N+2 oder 9N (N = eine Ganzzahl), abgetastet werden.

Mit anderen Worten erfolgt der Suchlaufstart beim Einschalten des Auto-Scanning-Getriebs gegenüber jedem Belieben mit der manuellen Abstimmung gewählten Punkt am Punkt 9N+2 oder 9N.

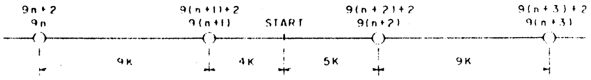

9n+2
9n
9(n+1)+2
9(n+1)
START
9(n+2)+2
9(n+2)
9(n+3)+2
9(n+3)
9K
4K
5K
9K

Abb. 5-9

5-2-7 TUNERAUSGANG-STUMMSHALTUNG

Wenn die BAND- oder PLL-Daten durch die [BAND], [UP], [DOWN], [MODE] oder Preset Ch-Tasten verändert werden oder wenn die Empfangsbetriebsart verändert wird.

Während der Stumm schaltung wird, wenn 50 msec seit der Stummabstimmungs-Initialisierung verstrichen sind, die Datenübertragung und sonstige Verarbeitungen vorgenommen. Danach wird, 450 msec nachdem diese Verfahren abgeschlossen sind die Stummschaltung aufgehoben. Wir nennen den Initialteil "Vor-Stummabschaltung" und den nachfolgenden Teil "Nach-Stummabschaltung".

Die nachstehende Zeichnung veranschaulicht das oben genannte.

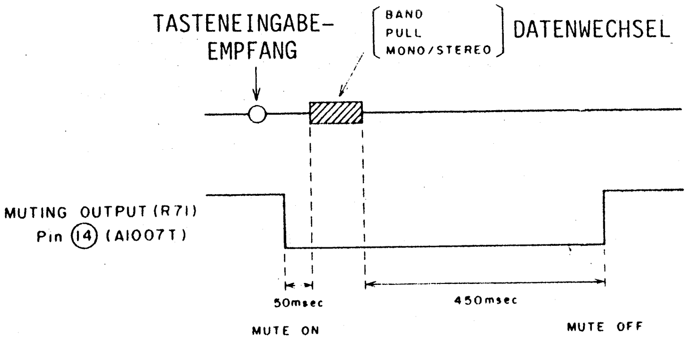

TASTENEINGABE-EMPFANG
BAND
PULL
MONO/STEREO
DATENWECHSEL
MUTING OUTPUT (R71)
Pin ⑭ (A1007T)
50msec
450msec
MUTE ON
MUTE OFF

Abb. 5-10

In Ausnahmefällen, wenn ein vorheriger Stummabstimmprozeß sich noch in der Ausführung befindet und dann eine Tasteneingabe erfolgt, wird die 50 msec. Vor-Stummabstimmung ausgegeben.

5-2-8 TASTENFUNKTION

(1) [BAND]

Mit jeder Betätigung dieser Taste erfolgt eine Umschaltung des Frequenzbandes. Die gewählten Bänder sind wie folgt:

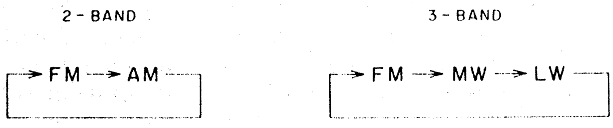

2-BAND
FM → AM
3-BAND
FM → MW → LW

Abb. 5-11

(2) [UP], [DOWN]
In der Betriebsart Manuelle Abstimmung wird mit jedem Drücken einer dieser Tasten die Empfangsfrequenz um einen Schritt verschoben.; bleibt die Taste kontinuierlich gedrückt, wird der Frequenzbereich mit 50 msec pro Schritt abgetastet. Im AITO-Scan-Betrieb wird der Frequenzbereich mit 100 msec Schritten abgetastet bis ein Sender eingefangen wird, worauf der Auto-Stop des Suchlaufbetriebes erfolgt. In der Auto-Scan-Betriebsart wird sofort bei Betätigung einer anderen Taste als [UP] und [DOWN] der Sendersuchlauf an dieser Stelle gestoppt.

(3) Vorabstimm-Kanal-Taste

a) Wenn der Tuner in der Active-Betriebart ist:
Außer im Bereitschafts-Betrieb zum Speichern, werden durch einmaliges Drücken der Vorabstimm-Kanal-Tasten die Frontseiten-Kanäle (1 bis 8) und die Rückseiten-Kanäle (9 bis 16) abwechselnd eingegeben und die z.Z. eingegebene Kanalnummer erscheint auf der Flüssigkristallanzeige.
In der Betriebsart Speicher-Bereitschaft wird die z.Z. empfangene Frequenz im Frontseitenspeicher (1 bis 8) oder Rückseitenspeicher (9 bis 16) unter der gedrückten Taste gespeichert und der Speicherbereitschafts-Betrieb wird aufgehoben.

b) Wenn der TUNERsich in der Non-Active-Betriebsart befindet:
Durch Drücken einer der Tasten wird der unter dieser Taste gespeicherte Frontseiten-Vorabstimmkanal (1 bis 8) geladen und die Daten an den Mikrocomputer des Verstärkers übertragen, so daß der Eingangswahlschalter des Verstärkers auf TUNER umgeschaltet wird. Wenn jedoch zuvor, in der Active-Betriebsart des Tuners, ein Rückseiten-Kanal (9 bis 16) eingeschaltet war und diese Kanaltaste nun gedrückt wird, so wird kein Frontseiten-Kanal (1 bis 8) sondern ein Rückseiten-Kanal (9 bis 16) eingegeben.

(4) [MEMO 1-8], [MEMO 1-16]
Diese Tasten dienen zum Speichern von Kanalfrequenzdaten im Vorabstimm-Kanal; sie werden jeweils für die Kanäle 1 bos 8 und 9 bis 16 verwendet. Beim Betätigen einer der Tasten leuchtet die MEMO-Anzeige auf und die Kanallnummern-Anzeige blinkt, um den Benutzer darauf hinzuweisen, welche Seite der Vorabstimm-Kanal-Tasten (1 bis 8) oder (9 bis 16) gerade in Betrieb sind.

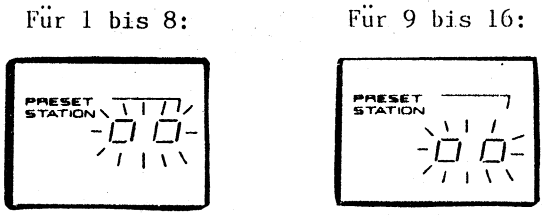

Für 1 bis 8:
Für 9 bis 16:

Abb. 5-12

Die obige Betriebsart wird 5 Sekunden lang beibehalten und das Blinken zehnmal mit 1/2 Impulsperiode wiederholt. Wenn jedoch die Vorabstimm-Kanal-Taste für Datenspeicherung oder eine beliebige andere Taste gedrückt wird, so wird der Speicher-Bereitschafts-Betrieb umgehend aufgehoben. In der Non-Active-Betriebsart des Tuners geschieht in diesem Falle nichts.

(5) [MODE]
Mit jedem Drücken dieser Taste wird der UKW-Empfang zwischen MONO und STEREO umgeschaltet.
Im Non-Active-Betrieb des Tuners geschieht in diesem Falle nichts.

(6) [SCAN MODE]
Mit jeder Betätigung dieser Taste wird die Sendersuchlauf-Funktion zwischen AUTO und MANUAL umgeschaltet und es erfolgt die entsprechende Anzeige.

VI. VERSTÄRKERTEIL-ABGLEICH

6-1 INSTRUMENTEN-ANSCHLÜSSE

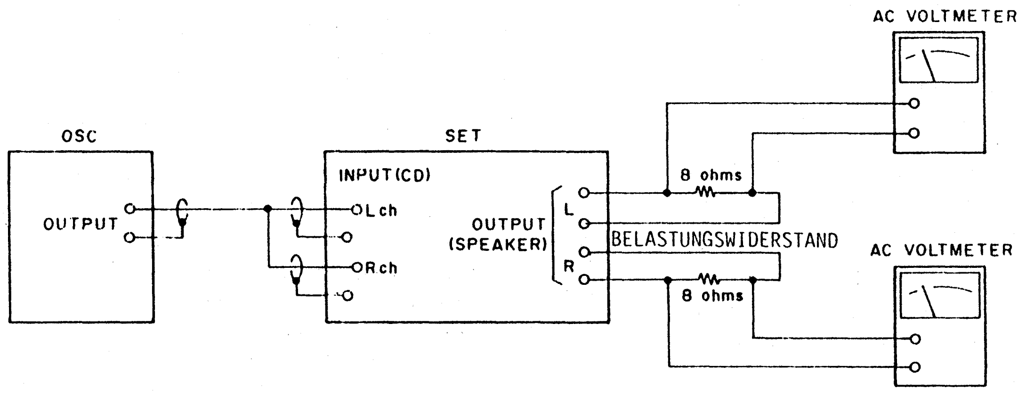

AC VOLTMETER
OSC
OUTPUT
SET
INPUT(CD)
L ch
R ch
OUTPUT
(SPEAKER)
L
R
8 ohms
BELASTUNGSWIDERSTAND
AC VOLTMETER
8 ohms

Abb. 6-1 Instrumentenanschlüsse zum Verstärkerteil-Abgleich

6-2 ABGLEICHPUNKTE AN DER HAUPTVERSTÄRKER-LEITERPLATTE

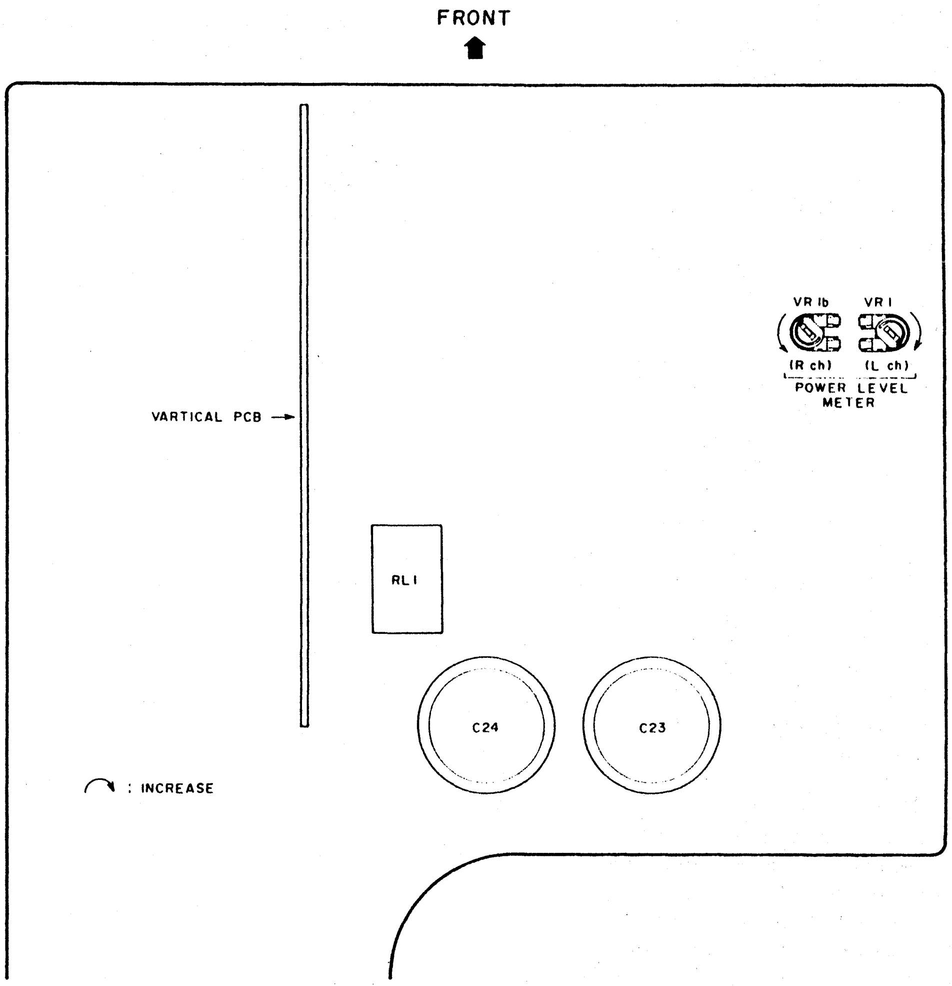

FRONT
VR Ib
VR I
(R ch)
(L ch)
POWER LEVEL
METER
VARTICAL PCB
RL I
C24
C23
: INCREASE

Abb. 6-2 Hauptverstärker-Leiterplatte

6-3 LEISTUNGSANZEIGEN-ABGLEICH

DAS DIREKTWAHL-POTENTIOMETER (MEMBRAN VOLUME) auf Maximum stellen und den TONE-Steller auf linearen Frequenzgang.

Ein 1 kHz Signal an die CD-Eingangsbuchsen (linker und rechter Kanal) anlegen und den Generator-Ausgang so abgleichen, daß der Wechselspannung-Voltmeter 15,5V anzeigen. Den Regelwiderstand VP1 so abgleichen, daß das POWER LEVEL Meter 30W anzeigt.

VII. TUNER-ABGLEICH

7-1 INSTRUMENTEN-ANSCHLÜSSE

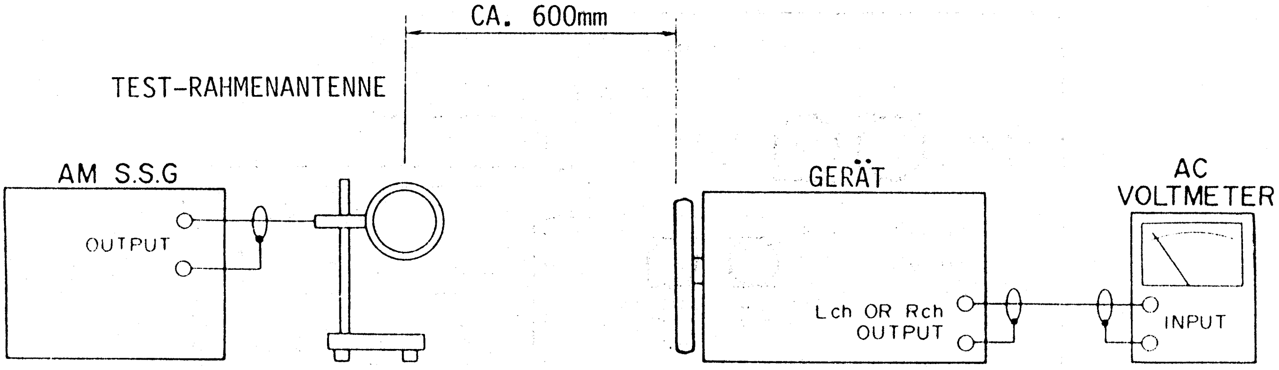

CA. 600mm
TEST-RAHMENANTENNE
AM S.S.G
OUTPUT
GERÄT
Lch OR Rch
OUTPUT
AC
VOLTMETER
INPUT

Abb. 7-1 Instrumenten-Anschlüsse für den Abgleich des AM-Teils (MW, LW)

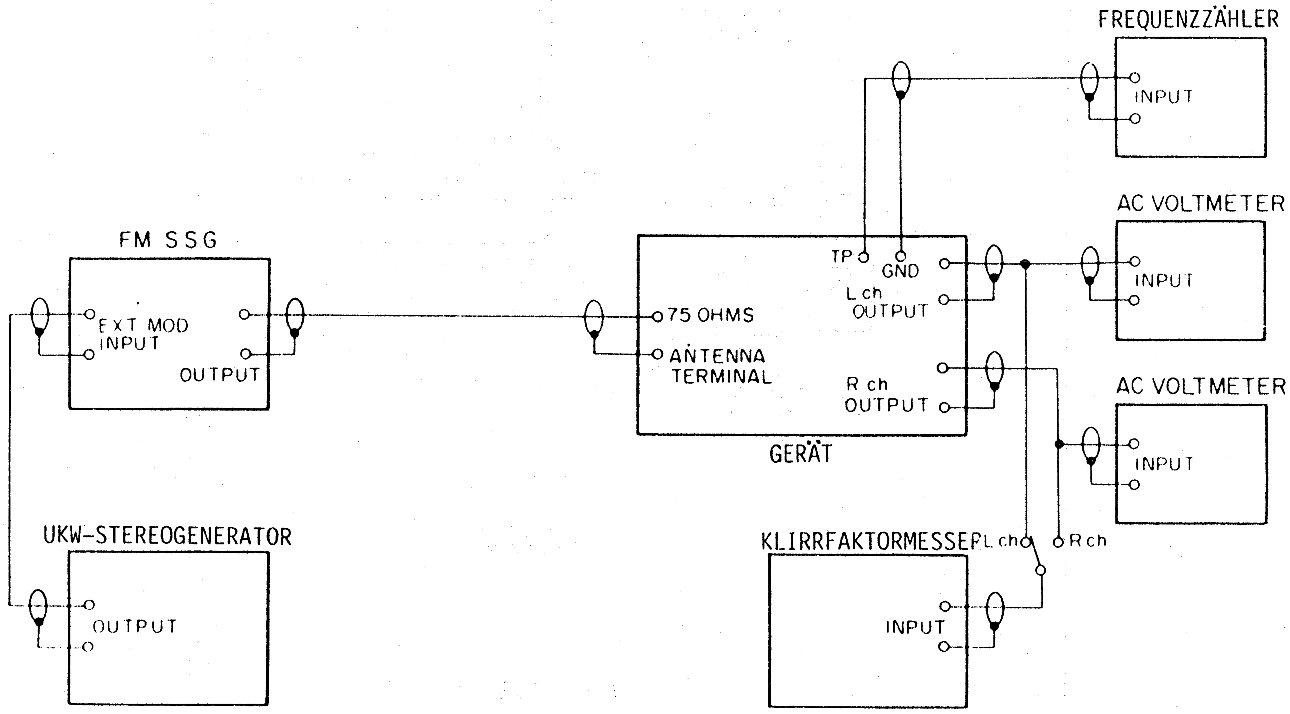

FREQUENZZÄHLER
INPUT
AC VOLTMETER
INPUT
AC VOLTMETER
INPUT
FM SSG
EXT MOD
INPUT
OUTPUT
TP
GND
L ch
OUTPUT
75 OHMS
ANTENNA
TERMINAL
R ch
OUTPUT
GERÄT
UKW-STEREOGENERATOR
OUTPUT
KLIRRFAKTORMESSER
L ch
R ch
INPUT

Abb. 7-2 Instrumentenanschlüsse zum Abgleich des UKW-Teils

7-2 TUNER, ABGLEICHPUNKTE EINGANGSSTUFE, MPX-LEITERPLATTE

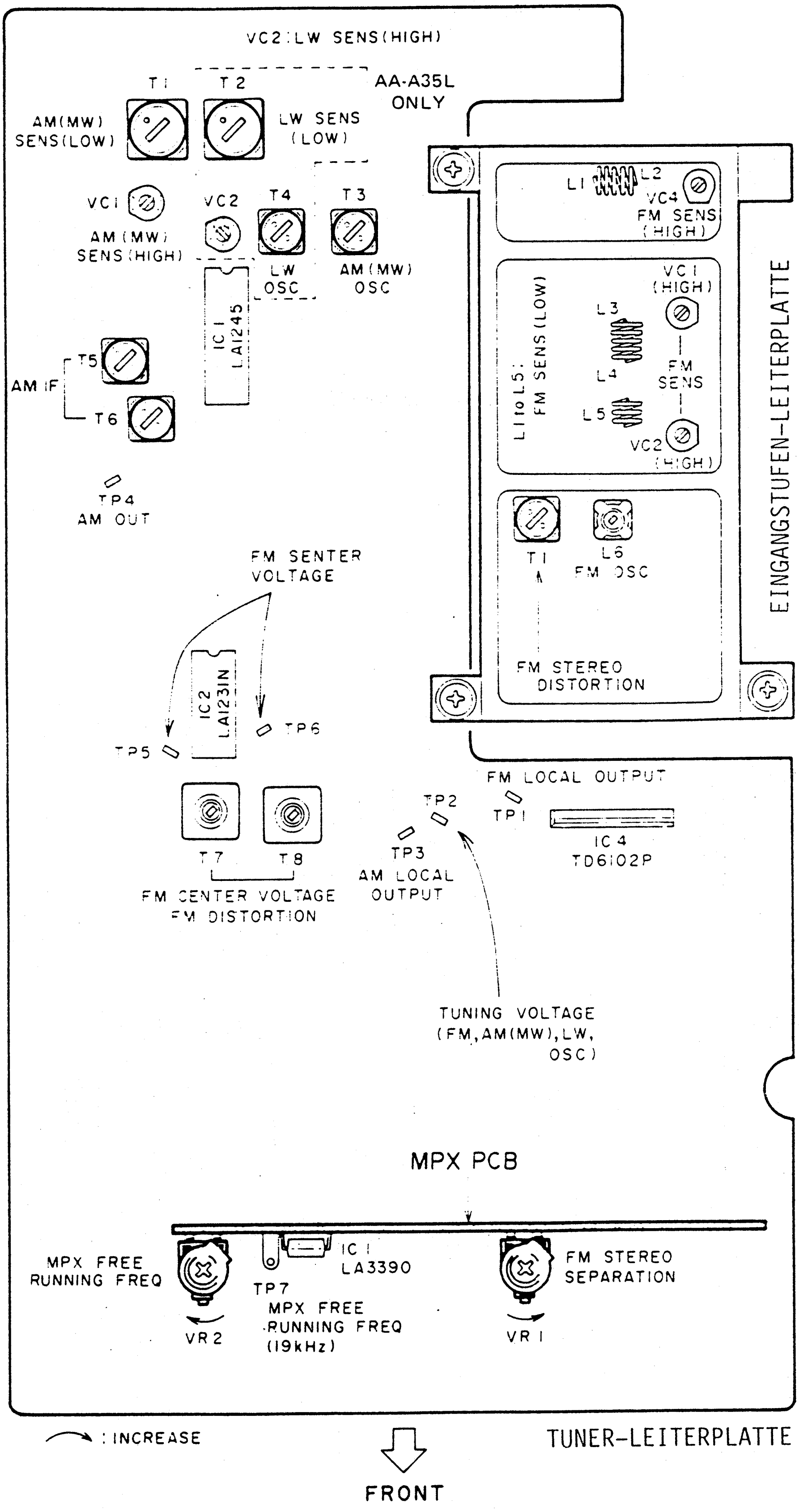

VC2: LW SENS (HIGH)
T1
T2
AA-A35L ONLY
AM(MW) SENS(LOW)
LW SENS (LOW)
VC1
AM (MW) SENS (HIGH)
VC2
T4
T3
LW OSC
AM (MW) OSC
IC1 LA1245
AM IF
T5
T6
TP4 AM OUT
FM SENTER VOLTAGE
IC2 LA1231N
TP5
TP6
T7
T8
FM CENTER VOLTAGE
FM DISTORTION
TP2
TP3
AM LOCAL OUTPUT
FM LOCAL OUTPUT
TP1
IC4 TD6102P
TUNING VOLTAGE (FM, AM(MW), LW, OSC)
L1
L2
VC4
FM SENS (HIGH)
VC1 (HIGH)
L3
L4
L5
L1 to L5: FM SENS (LOW)
FM SENS
VC2 (HIGH)
T1
L6
FM OSC
FM STEREO DISTORTION
EINGANGSTUFEN-LEITERPLATTE
MPX PCB
MPX FREE RUNNING FREQ
IC1 LA3390
TP7
MPX FREE RUNNING FREQ (19kHz)
VR2
FM STEREO SEPARATION
VR1
: INCREASE
FRONT
TUNER-LEITERPLATTE

Abb. 7-3

7-4 ABGLEICH UKW-TEIL

Schritt	Abgleichgegenstand	Abgleichpunkt	Ergebnis	Bemerkungen
1	FM OSC	L6 (in FRONT END PCB)	12V bei 108, 1MHz	Band-Schalter auf FM 108, 1MHz Monoeingang. Anzeige auf 108,1MHz. Gleichspannungs-Voltmeter an TP2 anschließen.
2	Empfindlichkeit, unterer Bereich	L1 bis L5 (in der Eingangsteil-Leiterplatte)	Weniger als 10dB Eingang vom HF-Generator	UKW-Betriebsarten-Schalter auf Mono 90MHz, Monoeingang. Anzeige auf 90MHz. 3% Klirrfaktor.
3	Empfindlichkeit oberer Bereich	VC1,2,4 (Auf der FM-Eingangsteil-Leiterplatte)	Weniger als 10dB Eingang vom HF-Generator	106MHz Monoeingang. Anzeige auf 106MHz. 3% Klirrfaktor.
4	Für optimale Ergebnisse die Schritte 2 und 3 zwei bis dreimal wiederholen			
5	Empfindlichkeit mittlerer Bereich überprüfung	Keine	Weniger als 10dB Eingang vom HF-Generator	98MHz, Monoeingang. Anzeige auf 98MHz. 3% Klirrfaktor.
6	UKW-Mittenspannung	T7, T8	0V-Anzeige	Gleichspannungs-Voltmeter zwischen TP5 und TP6. Nur Rauschen ohne Interferenz vom Sender abstimmen.
7	Klirrfaktor (mono)	T7, T8	Weniger als 0,3%	98MHz, 60dB, Monoeingang. Anzeige auf 98MHz. Überprüfen, das die Gleichspannung zwischen TP5 und TP6 innerhalb 0 ± 0,025V liegt.
8	MPX Freilauffrequenz	VR2 (auf der MPX-Leiterplatte)	19kHz	98MHz, 60dB, Stereoeingang. Anzeige auf 98MHz. Frequenzzähler an TP7 anschließen (auf der MPX-Leiterplatte)
9	Stereotrennung	VR1 (auf der MPX-Leiterplatte)	Mehr als 38dB	98MHz, 60dB, Stereo L-CH (R-CH) Eingang: Anzeige auf 98MHz. Minimum ausgang von R-CH (L-CH)
10	Klirrfaktor (Stereo)	T1 (an der FM-Eingangsteil-Leiterplatte) T7, T8	Weniger als 0,5%	98MHz, 60dB Stereo (L-CH oder R-CH) Eingang. Anzeige auf 98MHz. Überprüfen, dass die Gleichspannung zwischen TP5 und TP6 innerhalb 0 ± 0,025V liegt.

HINWEIS:
1. Den internen Modulationssignalgenerator auf 100% (75kHz Hub) (in Europa 40kHz Hub) je 1kHz einstellen.
2. T1 (Eingangsstufe) abgleichen, wenn der korrekte Klirrfaktor (STEREO) in Schritt 10 nicht erhalten wird (im Falle von mehr als einer halben Umdrehung, muß anschließend die UKW-Empfindlichkeit überprüft werden.

7-3 ABRUFE DER VORABSTIMM-FREQUENZ FÜR DEN TUNERABGLEICH

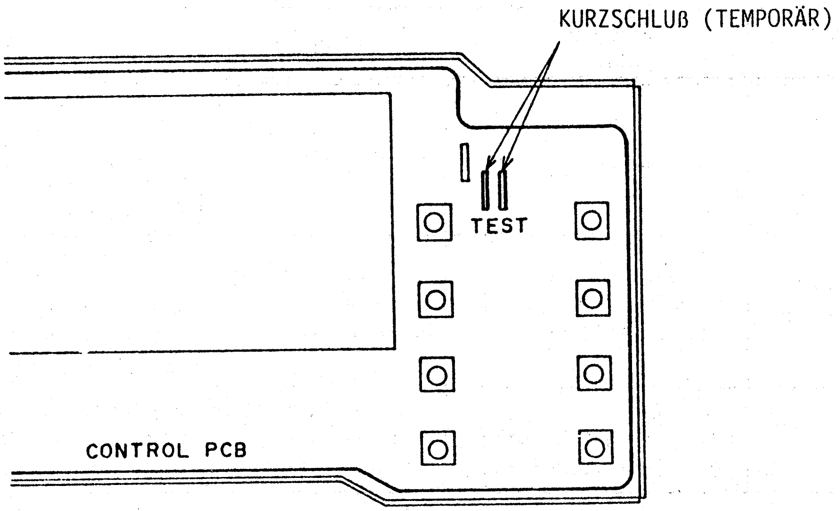


Abb. 7-4

Die Tuner-Vorabstimmungfrequenzen zum Abgleich der HF-, ZF und FM-Demodulatoren können anstelle der TUNING-Betriebssteuertaste voreingestellt werden, um die Testfrequenzen vom Signalgenerator zu empfangen.

Die in Abb. 7-4 gezeigten zwei Testpunkte vorübergehend kurzschließen. Daraufhin wählt man die erforderliche Testfrequenz durch Drücken einer der Vorabstimm-Sender-Tasten gem. Tabelle 7-1.

		Vorabstimm-Sender-Kanal							
	Tasten / Kanal	1/9	2/10	3/11	4/12	5/13	6/14	7/15	8/16
USA & CANADA	1 - 8	AM 600kHz	AM 1000kHz	AM 1400kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 - 16	AM 530kHz	AM 1000kHz	AM 1611kHz	FM 87.4MHz	FM 90.0MHz	* FM 98.0MHz	FM 106.0MHz	FM 108.1MHz
EUROPE 3 BAND	1 - 8	MW 603kHz	MW 999kHz	MW 1404kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 - 16	MW 522kHz	MW 999kHz	MW 1611kHz	LW 146kHz	LW 160kHz	LW 200kHz	LW 300kHz	LW 353kHz
EUROPE 2 BAND UNIVERSAL AREA	1 - 8	AM 603kHz	AM 999kHz	AM 1404kHz	FM 88.0MHz	FM 90.0MHz	FM 98.0MHz	FM 106.0MHz	FM 108.0MHz
	9 - 16	AM 522kHz	AM 999kHz	AM 1611kHz	FM 87.4MHz	FM 90.0MHz	* FM 98.0MHz	FM 106.0MHz	FM 108.1MHz

* = FM AUTO

Chart 7-1

HINWEIS: Nur für Modell $\boxed{U}$ wird der an der Rückseite befindliche AM STEP-Schalter auf 9kHz gestellt.

7-5 ABGLEICH LW-TEIL (FÜR AA-A35L)

Schritt	Abgleichgegenstand	Abgleichpunkt	Ergebnis	Bemerkungen
1	LW OSC	T4	7.0V bie 353kHz	Frequenzbandschalter auf LW. 353kHz Eingang. Anzeige auf 353kHZ. Gleichspannungs-Voltmeter an RP2 anschließen.
2	Empfindlichkeit unterer Bereich	T2	Weniger als 65dB Eingang vom HF-Generator	160kHz Eingang. Anzeige auf 160kHz. 10% Klirrfaktor.
3	Empfindlichkeit oberer Bereich	TC2	Weniger als 65dB vom HF-Generator	300kHz Eingang. Anzeige auf 300kHz. 10% Klirrfaktor.
4	Für optimale Ergebnisse die Schritte 2 und 3 zwei bis dreimal wiederholen			
5	Empfindlichkeit mittlerer Bereich (Überprüfung)	Keine	Weniger als 65dB Eingang vom HF-Generator	200kHz Eingang. Anzeige auf 200kHz. 10% Klirrfaktor.
6	Klirrfaktor (Überprüfung)	Keine	Weniger als 2,5%	200kHz, 74dB Eingang. Eingang auf 200kHz.

HINWEIS: Den internen Modulationssignalgenerator auf 30% je 1kHz einstellen.

7-6 ABGLEICH AM (MW) TEIL

Schritt	Abgleichgegenstand	Abgleichpunkt	Ergebnis	Bemerkungen
1	AM (MW) OSC (siehe HINWEIS 3)	T3	6,7V bei 1400kHz (1404kHz)	Frequenzbandschalter auf AM (MW) 1400kHz (1404kHz) Eingang. Anzeige auf 1400kHz (1404kHz). Gleichspannungs-Voltmeter an TP2 anschließen.
2	Empfindlichkeit, unterer Bereich	T1	Weniger als 60dB Eingang vom HF-Generator	600kHz (603kHz) Eingang. Anzeige auf 600kHz (603kHz). 10% Klirrfaktor.
3	Empfindlichkeit, oberer Bereich	VC1	Weniger als 60dB Eingang vom HF-Generator	1400kHz (1404kHz) Eingang. Anzeige auf 1400kHz (1404kHz). 10% Klirrfaktor.
4	Für optimale Ergebnisse die Schritte 2 und 3 zwei bis dreimal wiederholen			
5	Empfindlichkeit, mittlerer Bereich (Überprüfung)	Keine	Weniger als 60dB Eingang vom HF-Generator	1000kHz (999kHz) Eingang. Anzeige auf 1000kHz (999kHz) 10% Klirrfaktor (Überprüfung).
6	Klirrfaktor (Überprufung)	Keine	Weniger als 2,0%	100kHz(999 kHz) 74dB Eingang. Anzeibe auf 1000kHz (999 kHz).
7	AM ZF	T5, T6	Max. Ausgang min. Klirrfaktor	1000kHz (999kHz) 74dB Eingang. Anzeige auf 1000kHz (999kHz).

HINWEIS:
1. Den internen Modulationssignalgenerator auf 30%, je 1kHz einstellen.
2. (kHz) in Ergebnis und Bemerkungen weist auf die Testfrequenzen im AM 9kHz Schritt-Bereich hin.
3. Beim Modell AA-A35L stellt man für optimale Ergebnisse den LW OSC vor diesem Abgleich ein.